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# MATERIEL SUPPORT
# TO
# CIVIL ENGINEER OPERATIONS

## VOLUME II

## FIELD RESEARCH AND STATISTICAL DATA

DEFENSE SUPPLY AGENCY

DEFENSE LOGISTICS
ANALYSIS OFFICE

SEPTEMBER 1976

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## FOREWORD

In a memorandum dated 28 March 1975 to the Assistant Secretaries (Installations and Logistics) of the Military Departments, the Director, Defense Supply Agency, and the Director, Joint Staff, Joint Chiefs of Staff, the Acting Assistant Secretary of Defense (Installations and Logistics) expressed concern at the proliferation of systems for providing supply support to the Civil Engineering function within the Department of Defense. In this same memorandum the Acting Assistant Secretary of Defense (Installations and Logistics) asked that the Defense Logistics Analysis Office (then the Defense Supply Agency Analysis Division) undertake a study of the techniques by which supply support is being provided to the Civil Engineering function. The following study objectives were established:

a. Identify and describe how materiel support is currently being provided to the Civil Engineering function within the Department of Defense; and,

b. Evaluate the desirability of using a Contractor Operated Civil Engineer Supply Store (a COCESS) to provide either local purchase or centrally procured and managed items, or both, to the Civil Engineer.

This Report contains the results of analyses performed with information obtained from briefings received from the Headquarters of the Military Services, on-site research at a representative range of Department of Defense activities in CONUS and overseas, and data submitted by the Military Services. Findings, conclusions, and recommendations based on these analyses are included in this Report.

This Report is presented in two Volumes:

Volume I contains the findings, conclusions, and recommendations of the Study. The recommendations and a summary of the findings and conclusions are contained in Chapter VI of Volume I, and this chapter serves as an "Executive Brief" to the contents of this Report.



AMERICAN REVOLUTION BICENTENNIAL 1776-1976

Volume II is divided in two Parts. Part A contains detailed descriptions of the Military Service organizations and systems for providing materiel support to the Civil Engineering function, as observed during the field research phase of this Study. Part B contains summaries and presentations of the statistical data on supply support for the Civil Engineer which were submitted by the Military Services.

Eugene B. Sterling

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# PART A

# FIELD RESEARCH

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# CHAPTER I

# FIELD RESEARCH

## A. INTRODUCTION

During the initial planning phase of this Study, each of the Military Services was tasked to present headquarters level briefings to provide background information to the Study Team. These briefings described the worldwide system used by each Service to provide materiel in support of Facilities Engineer (FE) operations. An integral part of the headquarters briefings were the Service proposals regarding representative installations to visit for on-site field research.

The briefings described how each Service has directed FE support be accomplished. The goal of the field research was to determine the actual means of FE supply support currently utilized by field installations.

In order to effectively analyze the FE supply support systems, study efforts were concentrated on organizational arrangements; requisition and materiel flow; echelons of supply; value of FE owned inventory; procurement techniques; sources of FE materiel; funding arrangements; responsiveness/effectiveness of FE supply support; and system flexibility. The research extended to all categories of FE materiel (i.e., Nationally Stock Numbered and nonstock numbered), regardless of source, and to all organizational elements that provide materiel support to FE operations. For purposes of this study, FE materials were defined as those items of supply used primarily by the FE in the maintenance and repair of real property. This excluded administrative supplies; equipment items; motor vehicles, materials handling, and construction equipment repair parts; and fuels.

## B. NATURE OF FIELD RESEARCH

1. Introduction. The field research was accomplished through visits to a representative sample of Department of Defense (DoD) installations, listed in Appendix A of this Volume. The field research effort was organized into the following four areas:

a. Installation management data.

b. Facilities Engineer data.

c. Central installation supply data.

d. Central installation procurement data.

2. Guidelines for Field Research

a. Management Data. Data was collected outlining the major organizations and functions of each installation. Special emphasis was placed on the interrelationship of the FE organization with its supporting supply and procurement functions, whether these were part of the FE organization or part of a central installation capability. Fiscal Year 1975 installation supply statistics and operating costs were obtained for use in determining the impact and cost of FE support.

b. Facilities Engineer Data

(1) Functions and Operations. Information was obtained on the different types of FE work performed, how this work generates, and how this work is scheduled and rescheduled. Research examined the amount of work, by type, in terms of dollar value and man-hours, for use in analysis of overall FE support.

(2) Integral Supply Support. Research identified the different supply sources within the FE organization from which the FE shop craftmen obtained various types of materiel. FE stockage levels were reviewed to determine stock replenishment methods; sources and types of funding; methods of issue to FE personnel; and disposal of excess supplies.

c. Central Installation Supply

(1) Supply Support to FE. This included the different sources from which the FE could draw materiel, types of materiel, stockage levels, replenishment cycles, and type and source of funds. When the FE had a supply element within his capability, the central installation supply organization was only briefly reviewed.

(2) Central Supply Sources. This included the procedures used by central supply to obtain support for the FE, requisitioning from Inventory Control Points (ICPs) local purchase through installation procurement, with the types of materiel and resupply procedures followed for each.

d. Central Installation Procurement. Procurement techniques and instruments were reviewed to determine the applicable criteria, procedures, and statistics in order to evaluate the effectiveness and responsiveness of local procurement. Where applicable, the COCESS operation was reviewed in terms of historical cost data and availability of supply support to FE.

e. Individual Item Research. During this part of the research, several of the oldest incomplete bills of materials were reviewed to determine which items had not been received. These items were then reviewed to determine current status and the reasons for the delay.

## C. ORGANIZATION OF PART A, VOLUME II

A record of these field research visits is presented in the following chapters. Reports are presented by Military Service, in the sequence Army, Navy, Air Force, and Marine Corps; within each Service, reports are presented in the order in which the activities were visited.

## CHAPTER II

## FORT SILL

### A. MANAGEMENT DATA

1. Installation Organization. Figure II-1 shows the major organizational elements at Fort Sill. The organizational units most directly associated with this research effort are:

The Directorate of Facilities Engineering (DFAE).
The Supply and Storage Division of the DFAE.
The (installation) Supply Division of the Directorate of Industrial Operations (DIO).
The (installation) Procurement Division of the DIO.

2. Facilities Engineer Organization. Figure II-2 shows the Directorate of Facilities Engineering organizational elements. The numbers of personnel authorized (total of 7 military and 530 civilian) for each organizational element is shown in Table II-1.

Table II-1

DFAE AUTHORIZED PERSONNEL

| Organization | Military | Civilian |
|---|---|---|
| Directorate Office | 1 | 2 |
| Administration | | 7 |
| Supply and Storage | | 19 |
| Engineering Division | 3 | 26 |
| Eng. Resources Management Division | | 28 |
| Fire Prevention & Protection Division | | 44 |
| Environmental & Energy Conservation Off. | | 5 |
| Utilities Division | | 174 |
| Buildings and Grounds Division | 3 | 225 |
| Total | 7 | 530 |

Source: Field Research

3. Facilities Engineer Supply. Figure II-3 shows the Supply and Storage Division of the DFAE. The authorized strength (total of 19 civilians) is shown in Table II-2.



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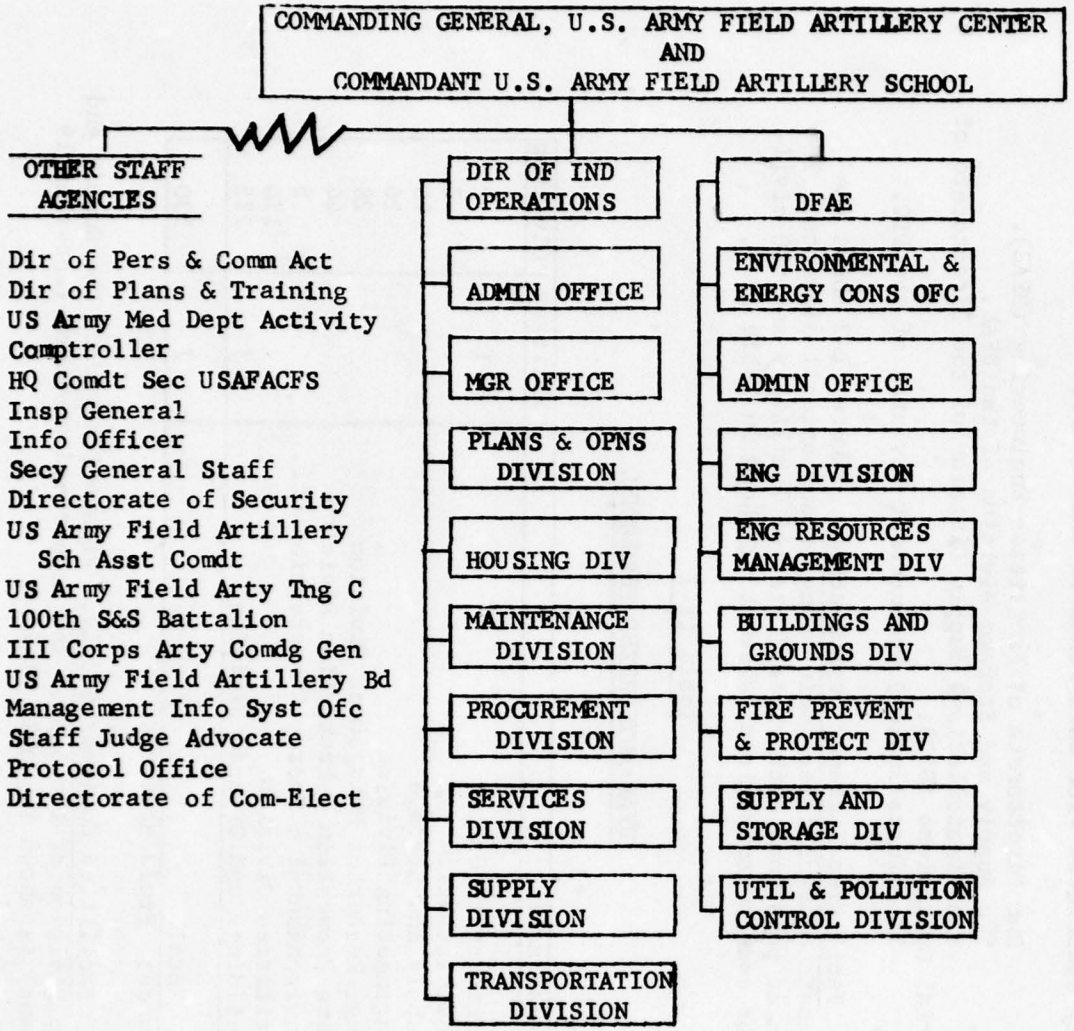

COMMANDING GENERAL, U.S. ARMY FIELD ARTILLERY CENTER
AND
COMMANDANT U.S. ARMY FIELD ARTILLERY SCHOOL
OTHER STAFF AGENCIES
Dir of Pers & Comm Act
Dir of Plans & Training
US Army Med Dept Activity
Comptroller
HQ Comdt Sec USAFACFS
Insp General
Info Officer
Secy General Staff
Directorate of Security
US Army Field Artillery Sch Asst Comdt
US Army Field Arty Tng C
100th S&S Battalion
III Corps Arty Comdg Gen
US Army Field Artillery Bd
Management Info Syst Ofc
Staff Judge Advocate
Protocol Office
Directorate of Com-Elect
DIR OF IND OPERATIONS
ADMIN OFFICE
MGR OFFICE
PLANS & OPNS DIVISION
HOUSING DIV
MAINTENANCE DIVISION
PROCUREMENT DIVISION
SERVICES DIVISION
SUPPLY DIVISION
TRANSPORTATION DIVISION
DFAE
ENVIRONMENTAL & ENERGY CONS OFC
ADMIN OFFICE
ENG DIVISION
ENG RESOURCES MANAGEMENT DIV
BUILDINGS AND GROUNDS DIV
FIRE PREVENT & PROTECT DIV
SUPPLY AND STORAGE DIV
UTIL & POLLUTION CONTROL DIVISION
TENANT AGENCIES
Training Aids Service Ofc
Engineer, Fort Worth District
USA Special Security Det
Ft Sill Res Ofc
525th MI Gp
USASA Sec Det Rgn III,
Ft Sill T
3d Judicial Circuit
Ft Sill Fld Ofc
6th Rgn USACIDC
USAMICOM Ln Ofc
Ft Sill (B280)
Lawton Fld Ofc
Def Inves Ser
USACC Agency Fort Sill
Malor Field Office (B241)
ARTADS TACFIRE Field Office
USA Readiness Gp
Ft Sill (ARR VII FSH)
AMC Log Asst Ofc
Ft Sill (TH202)
Defense Prop Disposal (B3323)

Figure II-1

## DIRECTORATE OF FACILITIES ENGINEERING
## FT SILL

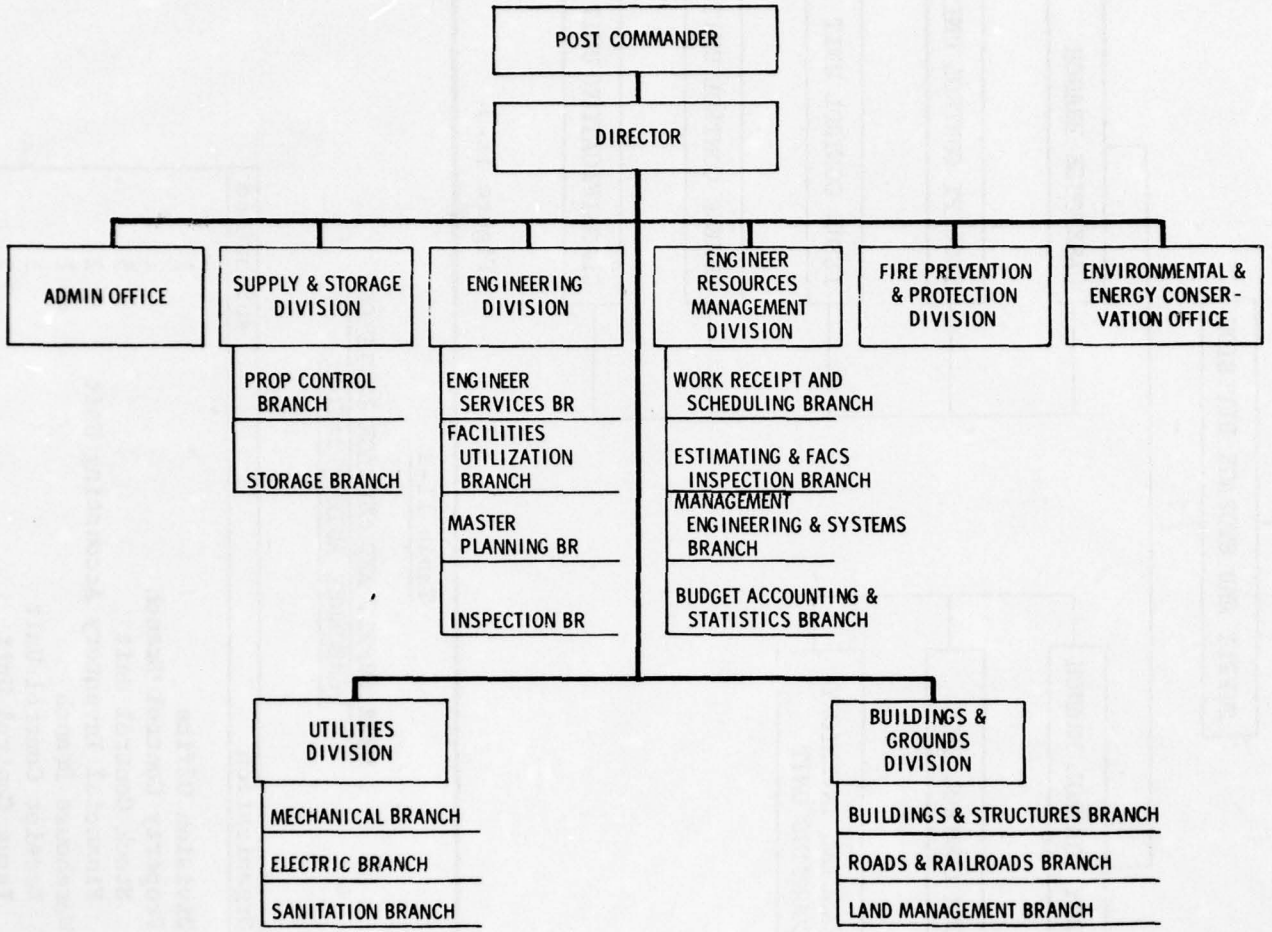



Figure II-2

FACILITIES ENGINEER SUPPLY

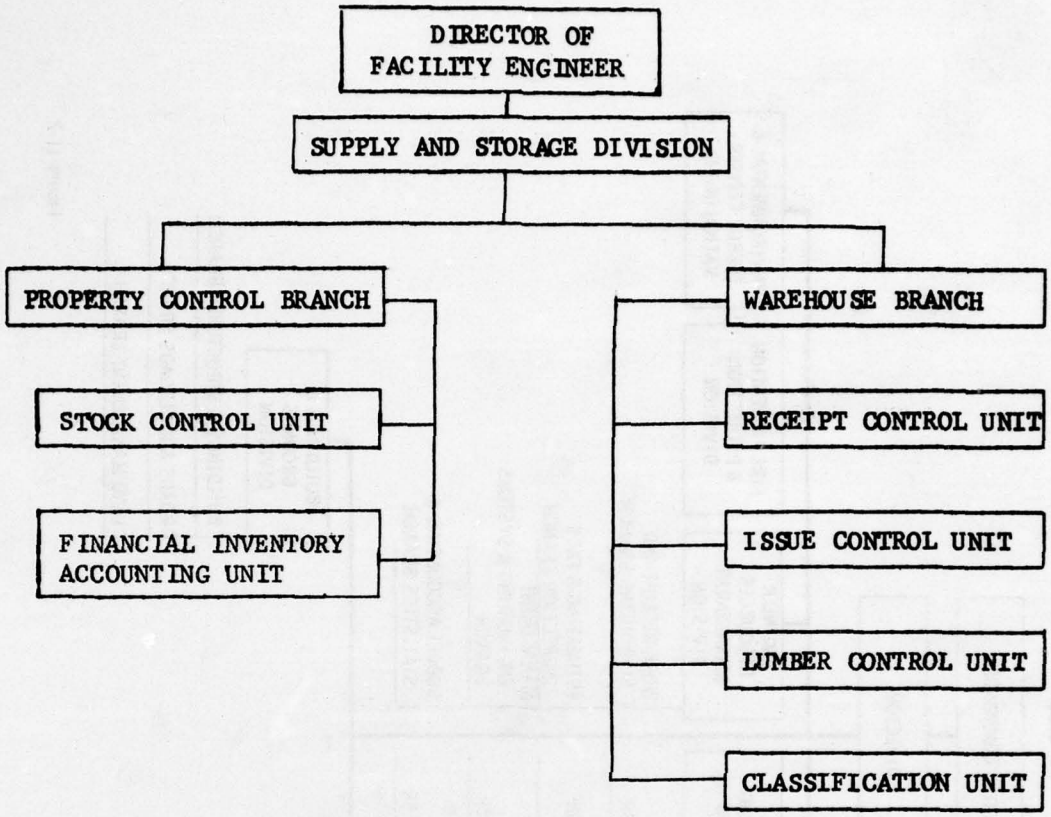



Figure II-3

Table II-2

DFAE SUPPLY AND STORAGE DIVISION
PERSONNEL AUTHORIZATION

| Organization | Authorized |
|---|---|
| Division Office | 1 |
| Property Control Branch | 1 |
| Stock Control Unit | 5 |
| Financial Inventory Accounting Unit | 2 |
| Warehouse Branch | 1 |
| Receipt Control Unit | 3 |
| Issue Control Unit | 2 |
| Lumber Control Unit | 2 |
| Classification Unit | 2 |
| Total | 19 |

Source: Field Research

4. Installation Supply (Supply Division). The Installation Supply Activity is the Supply Division of the Directorate for Industrial Operations.

5. Installation Procurement (Procurement Division). Figure II-4 illustrates the organizational structure of the (installation) Procurement Division located within the DIO. Also illustrated are the number of grades/rank of personnel.

DIRECTORATE OF INDUSTRIAL OPERATIONS

PROCUREMENT DIVISION

| | |
|---|---|
| 1 Chief, Procurement Division | Major |
| 1 Procurement Officer | GS-1102-12 |
| 3 Contract Specialists | GS-1102-11 |
| 1 Reporting Steno | GS-312-5 |

ADMIN

| | |
|---|---|
| 1 Supervisory Procurement Clerk | GS-1106-5 |
| 2 Procurement Clerks (Typ) | GS-1106-3 |
| 1 Mail Clerk (Typ) | GS-305-2 |
| 1 Clerk-Typist | GS-322-2 |

BRANCH A

| | |
|---|---|
| 1 Supervisory Procurement Clerk | GS-1102-9 |
| 1 Procurement Agent | GS-1102-7 |
| 3 Purchasing Agents (Typ) | GS-1105-5 |
| 2 Purchasing Agents (Typ) | GS-1105-4 |
| 1 Procurement Clerk (Typ) | GS-1106-3 |

BRANCH B

| | |
|---|---|
| 1 Supervisory Procurement Agent | GS-1102-9 |
| 1 Procurement Agent | GS-1102-7 |
| 3 Purchasing Agents (Typ) | GS-1105-5 |
| 2 Purchasing Agents (Typ) | GS-1105-4 |
| 1 Procurement Clerk (Typ) | GS-1106-3 |

BRANCH C

| | |
|---|---|
| 1 Supervisory Procurement Agent | GS-1102-9 |
| 1 Procurement Agent | GS-1102-7 |
| 3 Purchasing Agent (Typ) | GS-1105-5 |
| 2 Purchasing Agent (Typ) | GS-1105-4 |
| 1 Procurement Clerk (Typ) | GS-1106-3 |

Figure II-4

6. Basic Supply Statistics. The Supply and Storage Division (Figure II-3) is the "supply organization for the DFAE." Overall supply statistics for this organization, for Fiscal Year 1975 and as of 30 June 1975, are as follows:

| | CP Items | LP Items | Total |
|---|---|---|---|
| Number of Items (stocked) | 1,557 | 3,464 | 5,021 |
| Inventory Value (6/30/75) | $129,590 | $288,444 | $437,781 1/ |
| Value of Demands (FY 1975) | $764,487 | $1,783,801 | $2,548,288 |
| Value of Procurements (FY 1975) | $841,765 2/ | $1,964,118 3/ | $2,805,883 |

1/ Includes $19,747 in an unfunded memorandum holding account.
2/ Requisitioned on the Central (ICP) System.
3/ Local purchase volume through orders by the DFAE supply organization or the Procurement Division.

B. FACILITIES ENGINEER (FE) DATA

1. Functions and Operations

a. Type of Work. The Facilities Engineer accomplishes maintenance and repair and provides general upkeep of the facility. Work includes minor construction and alterations, operation of utility systems, furnishing fire protection, entomology and custodial services and the maintenance and repair of roads, railroads, grounds, surfaced areas, buildings, and structures.

b. Workload Generation. Work falls into three general categories as follows:

(1) Service Orders (SOs). Work that must be accomplished in less than 16 man-hours, with a total cost of less than $350 and requires the effort of only one trade shop. SOs are prepared for work requested by telephone, or in writing on DA Form 2699, Service Order (Facilities Engineering). SOs can fall into three categories: 1 - Emergency, 2 - Urgent, and 3 - Routine. When the work is approved, copies 1 and 2 of the SOs are forwarded to the shop foreman, copy 3 is retained by the work receptionist. The foreman schedules the work and gives copy 1 to the assigned worker, copy 2 is placed in the uncompleted file. The worker accomplishes the work and notes on the SO the date, time, and a brief description of the work performed. The

SO is returned to the foreman who removes copy 2 from the uncompleted file, enters shop stock data from copy 1, initials copy 1 and returns the SO to the Work Coordinating Office. Copy 2 is used for supply replenishment information; copy 3 is filed in the SO numerical sequence file and copy 1 is filed by work order number by month during which the work was completed.

(2) Standing Operations Orders (SOOs). Work that is predictable in advance, and includes operations, services, and routine maintenance, e.g., operation of the water and sewage system or heating plants. SOOs are frequently written on an annual or seasonal basis. Description of the work, tasks, and related information is annotated on DA Form 2700 (Work Order - Facilities Engineering).

(3) Individual Job Orders (IJOs). Work that applies to individual jobs of varying size. IJOs can apply to maintenance and repair and/or minor constructions and alterations. DA Form 2701 (Job Order Request - Facilities Engineering) is used to request work beyond the scope of an SO. Flow of an IJO follows:

(a) Requestor of the work initiates DA Form 2701.

(b) IJO arrives in FE work reception in four copies.

(c) IJO is given a serial number and is timed and dated by the work order clerk.

(d) IJO is acted upon. Copy returned to customer, decision made as to whether maintenance or minor construction. Goes to suspense file or routed for continuing action.

(e) IJO goes to planners and estimators for validation, scope, and estimation of work involved.

(f) IJO is reviewed by shop(s) to determine tasks and man-hours required.

(g) Materials unique to the job are listed on the DA Form 2702, Bill of Materials.

(h) Approved or disapproved IJO goes back to work reception desk.

(i) When IJO is approved DA Form 2700 is prepared and copy forwarded to the respective shops and filed with DA Form 2701.

(j) IJOs without materiel requirements go to scheduling. IJO with materiel requirements are routed to materiel coordinator.

(k) Materiel coordinator checks items and determines if items are to be acquired from stock or procurement. Stock items are withdrawn from the warehouse and placed in the holding area. Supply is notified of items that must be procured. Supply items are one of three possibilities: stocked and in stock; stocked but out of stock; or a procurement item.

(l) Except for special circumstances an IJO goes to scheduler when all supply items are on hand.

(m) Scheduler determines work priority of the IJO, searches for man-hours and schedules appropriately.

c. Scheduling

Work is scheduled by preparing preliminary master work schedule based upon information assembled from the long range and annual work plans that pertain to SOs, SOOs, and IJOs. The preliminary schedule is reviewed at the weekly scheduling meeting, which is attended by the Facilities Engineer or his designee. Changes considered necessary are made at the weekly meeting and the schedule is prepared in final form. The foremen of the various trade shops after receiving the weekly work schedule, and man-hour information, distribute employees as follows:

(1) SOs are staffed with manpower to comply with the work load.

(2) Manpower for SOOs are adjusted if necessary, to meet a specific requirement.

(3) IJOs are staffed with manpower available and work is scheduled by work priority 1, 2, or 3. Work force distribution by man-hours for Fiscal Year 1975 was as follows:

| | Man-Hours | Percent |
|---|---|---|
| Overhead | 158,925 | 21% |
| Service Orders (SOs) | 101,723 | 13 |
| Standing Operations Orders (SOOs) | 188,508 | 24 |
| Individual Job Orders (IJOs) | 323,069 | 42 |
| Total Man-Hours | 772,225 | 100% |

The progress and scheduling of IJOs is displayed by use of the following display boards:

(1) Awaiting Materials Board - Reflects man-hour and materiel status by each trade shop.

(2) Awaiting Scheduling Board - Reflects that materials are available and the IJO is awaiting man-hours in shops to accomplish the work. IJOs are scheduled when all materials and supplies are either on hand in the holding area or available from supply.

Approximately 182 IJOs with materials available were waiting for accomplishment. Backlog of work for which materials and supplies were on hand was estimated at 88,277 man-hours. Data pertaining to man-hours lost due to work rescheduling was not available.

2. Supply Support. Facilities Engineering work is supported with materials from the following sources:

a. Facilities Engineering Supply. The FE supply with warehouses and inventory is a part of the FE organization. Workmen with an approved work order enter the warehouse and supplies are issued from stock by preparation of a DA Form 3122 (Request for Issue or Turn-In).

b. Shop Stock. Small quantities of expendable items are issued to shops. Workmen can utilize the items without preparation of a formal document. Items are replenished on a 15-day level. Supply replaces the items consumed through use of a DA Form 3122 on which the items replenished are listed. Costs of replenishment is distributed percentage-wise to the work performed during the period of issue. Value of shop stock is estimated at $25,000.

c. Holding Area Stocks. The materiel coordinator when advised that an IJO will require supplies and materials contacts supply and action is taken to withdraw the items from stock or initiate procurement. Items are placed in the holding area as received. The materiel coordinator signs for items in the holding area. When the IJO is ready for accomplishment the workman with the approved work order draws the materials and signs for same through use of a locally modified DA Form 2496-1 (Disposition Form). No record of dollar value of materials in the holding area is maintained; however, it is estimated that this inventory is worth approximately $100,000. Items in the holding area are bought from the stock fund when signed for by the materiel coordinator.

d. Excess Stock. Items that are leftover from IJOs or generated as excess from work orders are turned in to the supply account. Pending turn-in these items are a source of supply. Value of items acquired from this source was not available, and was thought to be minor.

### 3. Bills of Materials (BOMs) for Individual Job Orders

Man-hour scheduling for Fiscal Year 1975 reflected that approximately 42% of the work force is consumed to accomplish IJOs. During Fiscal Year 1976 to date (26 September 1975), 260 IJOs were issued. A quick count indicated that status of materials/supplies for IJOs was as follows:

| | | |
|---|---|---|
| IJO Work Orders | | 260 |
| Materials/supplies issued | 56 | |
| Materials/supplies available but not issued | 63 | 119 |
| Waiting for materials/supplies | | 141 |

The timeframe for the back ordered IJO items follows:

| Time | IJOs |
|---|---|
| 0-30 days | 71 |
| 30-60 days | 41 |
| over 60 days | 29 |

Work represented by IJOs for which items are on hand and awaiting scheduling was estimated to be 88,277 man-hours. Work represented by IJOs for which materials are not on hand is estimated to be 19,980 man-hours.

## C. SUPPLY AND STORAGE DIVISION

### 1. Organization and Manning

The Supply and Storage (S&S) Division is a part of the Directorate of Facilities Engineering. It is an independent supply organization having its own stock record account number that provides the capability to place requisitions on the Defense Supply Agency (DSA), General Services Administration (GSA), Army Materiel Development and Readiness Command (DARCOM), and local purchase sources. The S&S Division is also able to requisition supplies through the central installation supply.

The S&S Division operates a stock fund and receives an annual acquisition authority from the central installation supply. This acquisition authority is used to requisition supplies from the respective supply sources. After receiving the supplies, the S&S Division sells the supplies to the Facilities Engineer which uses Operations and Maintenance (O&M) funds to make the purchase and reimburse the stock fund. Because the stock fund is not a revolving stock fund at the S&S Division level, the O&M funds are used by the FE to reimburse the stock fund at the central installation supply level, not at the S&S Division level. The stock fund acquisition authority given annually to the S&S Division is spent to zero as if the S&S Division was given the O&M funds to directly reimburse the central installation supply stock fund for supplies purchased.

Wage rates for Wage Board employees in the S&S Division are as follows:

| | |
|---|---|
| WS-04 | $5.08 per hour |
| WG-05 | 3.81 per hour |
| WG-06 | 4.07 per hour |

These rates are applied to the Wichita Falls, Texas-Southwestern Oklahoma area.

2. Base Supply and Facilities Engineer Statistics

| | CP | LP | GSA |
|---|---|---|---|
| Total Number Line Items | | | |
| Installation Total | 21,395 | unk | 3,310 |
| FE | 801 | 3,464 | 756 |
| VAD Fiscal Year 1975 | | | |
| Installation Total | $32,120,922 | unk | $4,970,211 |
| FE | $597,534 | $1,683,801 | $366,953 |
| Total Value of Inventory, as of 30 June 75 | | | |
| Installation Total | $6,280,635 | unk | $971,815 |
| FE | $67,387 | $288,444 | $62,203 |
| Value of Fiscal Year 1975 Procurement (including LP and stock and appropriation-funded materiel obtained from ICPs) | | | |
| Installation Total | $43,800,040 | unk | $6,777,373 |
| FE | $437,718 | $1,964,118 | $404,047 |

The above local purchase figures for the FE were obtained from the Supply and Storage personnel during the initial briefing. The figures for Central Procurement (CP) and GSA are estimates based on the percentage of the total requisitions sent to GSA. The requisition submissions are displayed in paragraph 4. which, when calculated, indicates 48% of the requisitions were sent to GSA by the FE S&S Division. Calculations also show that 13.4% of the requisitions were submitted to GSA by the installation supply.

3. Supply Support to the Facilities Engineer

The Facilities Engineer draws supplies from several sources within the confines of Fort Sill. These sources include Bills of Materials being held for other work, the Defense Property Disposal Office (DPDO), the memorandum holding account, the shop stock, and the S&S Division.

Supplies are withdrawn from Bills of Materials that are being accumulated for other work. In these instances, supplies are withdrawn only if the work is of a higher priority than the work for which the items are held. A DA Form 3122 is used to transfer the materiels between work orders.

The FE also draws some supplies from the DPDO. Workmen, with authorization from the S&S Division, review the materiel in the DPDO. Information concerning the required supplies is entered on a list which is turned over to the S&S Division. The S&S Division makes the withdrawal with a DA Form 2765-1 (Request for Issue or Turn-In) free of charge and issues the supplies to the FE without charge.

Another source for the FE to obtain supplies is the memorandum holding account. This account is made up of items left over from completed or cancelled work orders. The items are turned in by the shops without credit, held by S&S Division in the memorandum account and reissued to the shop without charge as the need for the items arises. Accountability for the items while they are held in the memorandum holding account is maintained informally on a 5x8 card which lists information pertinent to the item.

The FE also uses supplies from a shop stock which is replenished by the S&S Division. The shop stocks are located within the shops and are composed of a 15 day stock of expendable supplies. The stocks are replenished weekly and expensed to the shop at the time of their issue. Establishment of shop stocks within a given shop is authorized by the Facilities Engineer.

The S&S Division is another source from which the FE draws supplies. To draw supplies, a DA Form 2496-1 is submitted to the S&S Division. The supplies are expensed to the FE at the time of issue.

4. Supply Support Sources for the Supply and Storage Division

The following is a breakout of the requisitions submitted to central supply sources for the period of 1 January 1975 to 30 June 1975.

| | DSA | DARCOM | GSA | Total |
|---|---|---|---|---|
| 1 Jan - 31 Mar 1975 | 315 | 8 | 299 | 622 |
| 1 Apr - 30 Jun 1975 | 913 | 10 | 786 | 1,709 |

The sharp increase in requisitions processed during the period of 1 April to 30 June 1975 is the result of the support rendered by the Fort Sill DFAE Supply and Storage Division to the Vietnamese refugee encampment at Fort Chaffee, Arkansas. The normal requisition volume without the Fort Chaffee workload is as indicated for the 1 January to 31 March 1975 period - 622 requisitions. Based on the normal volume for the quarter represented during 1 January to 31 March 1975, the annual volume would be about 2,500 requisitions. In addition, 7,215 local purchase transactions were processed by the S&S Division to obtain supplies. 1,732 were processed directly to the S&S Division Blanket Purchase Agreement (BPA) clerk because they were within the $250 authority granted to the S&S Division to make purchases from local vendors. The remainder, 5,483, were submitted to the Procurement Division of the Directorate of Industrial Operations for local purchase because they were above the $250 authority.

Requisitions submitted to central sources are submitted by mail or through the AUTODIN network. The primary source for GSA items is Fort Worth, Texas. Defense General Supply Center (DGSC) and Defense Construction Supply Center (DFSC) are the primary sources for DSA items. Only a small number of requisitions are submitted to DARCOM sources as shown in the beginning of this paragraph. All requisitions are submitted with a stock fund citation to reimburse sources of supply for items received. DFAE S&S Division also submits requisitions to the Supply Division (Central Supply) of the Director of Industrial Operations. In Fiscal Year 1975, 143 requisitions, valued at $7,600, were submitted to this source.

Local purchase of centrally procured items takes place if a central source cannot meet the required delivery date of the work. This is done without checking with the central source if the requirement is an emergency. If an item is placed on requisition and not delivered after 30 days have elapsed, local purchase action is taken to meet the date the work is scheduled to be performed. These actions are taken about twice weekly.

Central procurement of local purchase items takes place when a local source cannot be found, or when the price of an item makes it more advantageous to buy through central sources. This action takes place only about 6 times per year.

5. Supply Support Sources for the Supply Division, Director for Operations (DIO)

Statistics obtained from the DIO management division show the following number of requisitions were submitted to the sources indicated for the period 1 April to 30 June 1975:

| | |
|---|---|
| DSA | 20,257 |
| DARCOM | 11,576 |
| GSA | 4,967 |
| Total | 36,800* |

*NOTE: These quantities include requisitions submitted by the DFAE S&S Division.

Assuming that the total quantity represents a typical quarter's requisition volume, the annual volume would be 147,200. Additionally, local purchase transactions for the installation amounted to an estimated 14,400.

6. Warehouse Operation

The S&S Division warehouse is operated in a fashion which allows workmen to shop for required supplies. Supplies are selected to satisfy the requirements of approved work orders assigned a specific cost code. Supplies are checked out on DA Form 3122 which is distributed as follows: one copy is retained in supply to make adjustments to the reorder card, DA Form 3718, and one is submitted to the DIO, supply division for stock fund financial accounting. The third copy is sent to the foreman of the shop that is to perform the work.

The warehouse maintains its stock position on the reorder card, DA Form 3718. This card is used as a request to replenish stocks in the warehouse when the reorder level is reached. The reorder card is sent to the stock control unit of the S&S Division, where requisitions/local purchase forms are prepared and submitted to the sources indicated in paragraph 4.

Inventories of the warehouse are conducted once annually on a wall-to-wall basis. The inventory is made on a weekend to keep interruptions of the operation to a minimum.

7. Bill Paying. The Finance and Accounting Office (F&AO) pays the local vendors for supplies received by the FE. Estimates from F&AO indicates that 16% of the bill paying effort is attributed to the bills paid for FE supplies. According to F&AO, this would equate to 1.5 personnel at the GS-06 level.

## D. PROCUREMENT

### 1. Introduction

Procurement in support of the FE at Fort Sill is performed within two separate organizations, the Procurement Division of the DIO (see Figure II-1) and the Stock Control Unit of the Supply and Storage Division of the DFAE (see Figure II-3).

The Procurement Division performs the total range of contracting, buying/ordering, and administrative functions for supplies, services, and construction requirements. Three personnel in the DFAE are authorized to order "up to $250 per order"; of the three authorized to order, one person devotes virtually full-time to the buying/ordering task.

### 2. Volume

a. Overall Procurement Volume. For Fiscal Year 1975, the Fort Sill Procurement Division processed the following actions:

| Type | Actions | Value (millions) |
|---|---|---|
| $10,000 and over | 800 | $19.7 |
| Under $10,000 | 60,439 | 24.9 |
| Total | 61,239 | $44.6 |

b. Procurement for the DFAE. The Fiscal Year 1975 procurement action log indicates that 7,774 actions were generated by the DFAE, and that the actions were processed as follows:

| Type of Procurement Action | Number | Percent |
|---|---|---|
| Cancellation | 155 | 2% |
| Contracts* | 233 | 3 |
| BPA Orders | 3,343 | 43 |
| DOs/POs (DD 1155s) | 4,043 | 52 |
| Total | 7,774 | 100% |

(* Includes contracts for supplies, services, and construction.)

3. Type of Procurement Action. Materiel support to the DFAE is provided primarily through the use of BPAs and Purchase Orders/Delivery Orders (POs/DOs) (DD-1155s). Imprest Funds are not used.

a. Blanket Purchase Agreements

Of the 60,439 Fort Sill procurement actions under $10,000, 24,074 (40%) were orders under BPAs. These BPA orders were valued at $4.9 million. Of the total BPA orders, 3,343 (14%) were for the DFAE. Of the total BPA orders for the DFAE 1,797 (54%) were orders by the procurement clerks located in the Stock Control Point of the DFAE, while the balance, 46%, were orders made by procurement clerks in the Procurement Division of the DIO.

As of 22 September 1975 there were 74 active BPAs - 59 within 100 miles of Fort Sill and 15 outside of a 100 mile radius. Twenty-nine of the BPAs were used by the DFAE; of the 29, six were used exclusively by the DFAE ordering personnel. All of the BPAS used by the DFAE were in the immediate vicinity of Fort Sill. Types of DFAE BPA supplies and sources were:

| | |
|---|---|
| Automotive/Equipment | 7 |
| Industrial Supplies and Welding | 5 |
| Hardware | 4 |
| Electric/Electronics | 3 |
| Lumber | 2 |
| Concrete and/or Asphalt | 2 |
| Chemical | 2 |
| Glass | 2 |
| Plumbing and Heating | 2 |

A review of 100 BPA orders effected by the DFAE procurement clerks and 50 BPA orders for the DFAE effected by the Procurement Division procurement clerks showed the following:

(1) Line Items per Order (all for DFAE Support)

| Number of Line Items | DFAE Orders | Procurement Division Orders |
|---|---|---|
| 1 | 65% | 54% |
| 2 | 21% | 20% |
| 3 | 9% | 10% |
| 4 | 3% | 2% |
| more than 4 | 2% | 14% |

This data illustrates a marked similarity in the number of items per order regardless of who did the ordering.

(2) Days from Order to Delivery (all of DFAE Support)

| Days | DFAE Orders | Procurement Division Orders |
|---|---|---|
| 1 | 42% | 6% |
| 2-4 | 19% | 4% |
| 5-10 | 18% | 4% |
| over 10 | 21% | 86% |

The data illustrates a significant difference in days from order to delivery under the two arrangements. Reasons for the difference, provided by the ordering personnel and/or observed during the review, were:

-- 92% of the DFAE orders were for a specific requirement and/or immediate use. 42% of the Procurement Division orders were in this category. The balance, 8% and 58%, respectively, were for stock. Requirements for stock have less urgency than those for projects.

-- The high percentage of one day deliveries for DFAE orders are associated with a pick-up program within the Lawton area.

-- Virtually all DFAE orders are of low dollar value and require only one or two phone calls. Stock orders made by the Procurement Division are of higher order value, and frequently require competition.

b. Purchase Orders/Delivery Orders. A review of forty POs/DOs showed the following:

(1) Location of Vendors. Of the forty orders, seven (17.5%) were in the Lawton/Fort Sill area; nine (22.5%) were in a 50-100 mile radius; and 24 (60%) were outside of a 100 mile radius of Fort Sill.

(2) Reasons for Buys. Twelve (30%) of the orders were for stock; the remainder (70%) were for programmed requirements.

(3) Quantity Ordered. Order quantities ranged from a single unit to over 1,200 (e.g., one gas burner to 1,200 pounds of stripping powder).

(4) Unit Price. Prices ranged from less than one dollar to over $400; however, only three items (7.5%) had a unit price greater than $100.

(5) Value of Orders. Order values ranged from $5.50 to over $3,500. Nine (22.5%) of the orders had a value over $500; five (12.5%) had values over $1,000; but only one order (2.5%) had a value over $2,500.

(6) Number of Items Per Order. The number of items per order were as follows:

| No. of L/I per Order | No. of Orders | Percent | Cum Percent |
|---|---|---|---|
| 1 | 16 | 40.0 | 40.0 |
| 2 | 4 | 10.0 | 50.0 |
| 3 | 5 | 12.5 | 62.5 |
| 4 | 4 | 10.0 | 72.5 |
| 5 | 3 | 7.5 | 80.0 |
| 6 | 4 | 10.0 | 90.0 |
| 7 | 1 | 2.5 | 92.5 |
| 9 | 1 | 2.5 | 95.0 |
| 14 | 1 | 2.5 | 97.5 |
| 17 | 1 | 2.5 | 100.0 |
| Total | 40 | 100.0 | 100.0 |

(7) Delivery Times. Delivery times, date of order to date of delivery, for the items were as follows:

| No. of Days | No. of Orders | Percent | Cum Percent |
|---|---|---|---|
| 1 - 10 | 11 | 27.5 | 27.5 |
| 11 - 20 | 14 | 35.0 | 62.5 |
| 21 - 30 | 7 | 17.5 | 80.0 |
| 31 - 40 | 3 | 7.5 | 87.5 |
| 41 - 50 | 1 | 2.5 | 90.0 |
| 51 - 60 | 2 | 5.0 | 95.0 |
| 61 - 90 | 2 | 5.0 | 100.0 |
| Total | 40 | 100.0 | 100.0 |

(8) Type of Items Ordered. A wide-range of items were ordered; examples are:

HARDWARE - oven knobs, saw blades, window glass.
PLUMBING - boiler valve, pressure relief valve.
REPAIR PARTS - DISC (air compressor), pump bearing.
WOOD PRODUCTS - lumber (1x 12), Astragal.
METAL PRODUCTS - galvanized hooks, snap rings.
MISCELLANEOUS - road rock, black paint.

Only three of the 40 items were obtained using delivery orders; these were: a lumber item under a DSA contract; a "No Parking Sign" from Federal Prison Industries; and a polishing brush under a GSA contract.

E. ITEM CHASE

1. A review of seven IJOs (10 items) revealed the following:

a. Seven of the 10 items were ordered from local purchase, 3 from GSA.

b. Items were for the most part small quantities (1 to 26 items).

c. Except for one item ($9.00), items were less than $100 each but over $10 each.

d. Two of the items were received, partial delivery was made for five items, estimated delivery date given for all remaining items.

2. Discussion indicated that delay in receipt of items was no problem as the jobs would be held until all the items were available. When jobs became "hot" delivery of items required is expedited. IJOs are usually of a routine nature.

3. Items of supply delaying IJO accomplishment were researched and results follow:

a. IJO 6111-5S delayed by lack of one each, Frame, Door and 1½ pair of 4½x4½ hinges. Items ordered by local purchase were originally required 23 May 1975. Partial delivery of one item was made as of 23 June 1975 and follow-ups with vendor were made 28 August and 24 September 1975. The IJO will be scheduled when all supplies and materials are received.

b. IJO 5999-5M delayed by lack of eight each, Receptacle, explosion proof. Item ordered by local purchase 21 March 1975 was required 24 June 1975. The item had an estimated delivery date of 24 June but had not been received as of 21 September 1975.

c. IJO 2028-5Q delayed by lack of one each, Over rim tub filler with shower attachment. Item ordered by local purchase 3 July 1975 for delivery by 4 August 1975. Item was delivered 5 August 1975.

d. IJO 3726-51C/1 delayed by lack of six each, 5340-00-178-7872, Hasp, high security. Item ordered from GSA 8 July 1975 was required 17 July 1975. IJO was started without the item which was delivered 11 August 1975.

e. IJO 4570-5X delayed by lack of 26 each Fixture, lighting, vapor type. Item ordered by local purchase 10 May 1975 for 5 June requirement. Partial delivery of seven was made 20 July 1975, follow-up for the balance was to be made 26 September 1975.

f. IJO 5084-5E delayed by lack of 13 each, Door, wood, 2'6" x 6'8" x 1 3/8" and 12 each, Door, wood, 3'0" x 6'8" x 1 3/8." Doors ordered from GSA 11 and 23 June 1975 for required date of 30 June 1975. Partial deliveries received 5 August and 8 September 1975 with balance to be provided 27 August and 2 October 1975.

g. IJO 6155-4E delayed by lack of one each Controller and two each Economizer. Items ordered by local purchase 11 July 1975 to meet required date of 18 July 1975. Latest estimated delivery date was 27 September 1975.

## CHAPTER III

## FORT BRAGG

### A. MANAGEMENT DATA

#### 1. Installation Organization

The basic mission of Fort Bragg is to provide training for the XVIII Airborne Corps and its assigned/attached units, including the 82nd Airborne Division located at Fort Bragg and the 101st Airborne Division (Air Assault) located at Fort Campbell, Kentucky.

A single combined headquarters provides command and supervision over both the XVIII Airborne Corps and over Fort Bragg, and is also responsible for providing the services required for the operation of the installation. The headquarters organization is shown in Figure III-1. Elements of the headquarters perform staff functions for both the XVIII Airborne Corps and for the installation. The personnel of these offices would be split if the Corps should deploy. The organizational elements of the headquarters which are under the Deputy Installation Commander-- who would become the installation commander upon deployment of the Corps-- all perform installation support functions. However, a number of the organizations under the Deputy Chief of Staff (e.g., the Assistant Chief of Staff, G-1/Personnel and Community Activities) are identified as having both Corps and installation functions, and a portion of these personnel would remain to perform these functions if the Corps were to deploy.

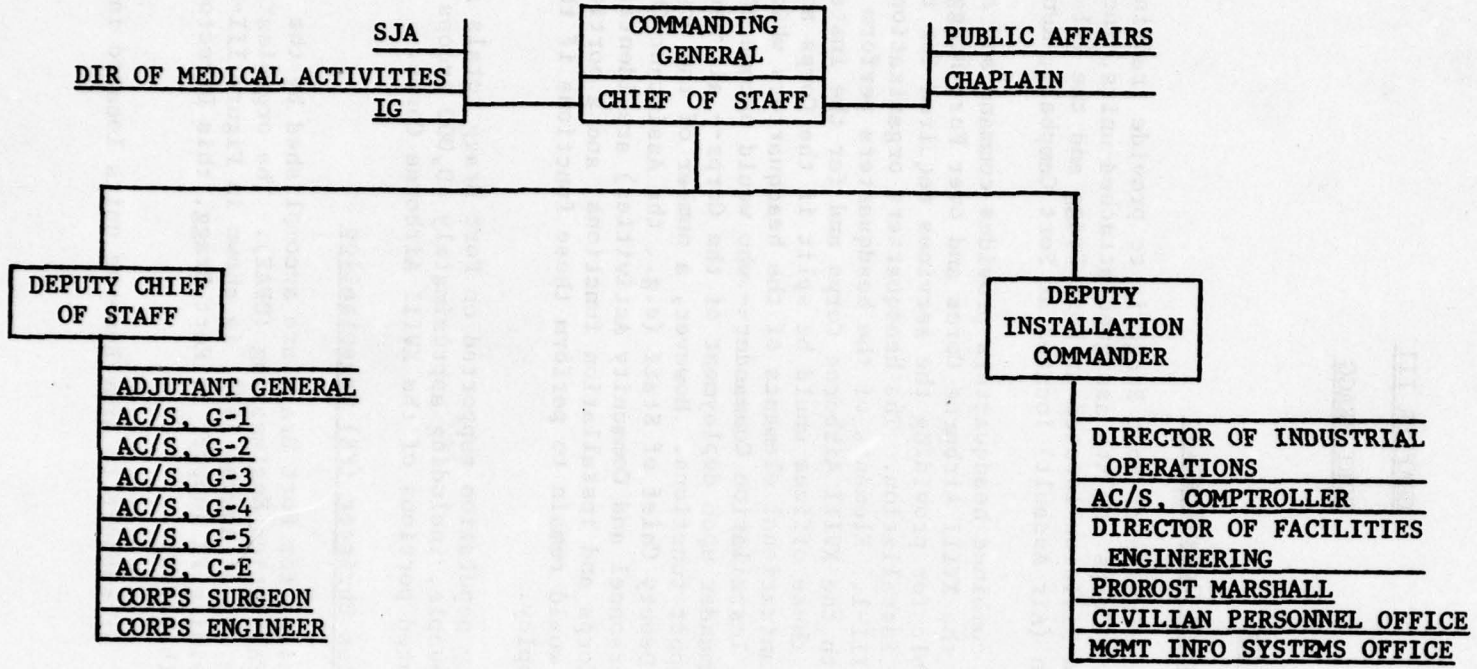
The daily population supported on Fort Bragg totals approximately 64,000 people, including approximately 40,000 troops in the combat-oriented portions of the XVIII Airborne Corps.

#### 2. Facilities Engineer (FE) Organization

FE functions for Fort Bragg are accomplished by the Directorate of Facilities Engineering (DFAE). The organization of this Directorate, as of August 1975, is shown in Figure III-2. In addition to providing FE support to Fort Bragg, this Directorate is also responsible for:

(1) FE support to Army Reserve units located in North Carolina; and,

## HEADQUARTERS XVIII AIRBORNE CORPS & FORT BRAGG




### MAJOR UNITS

82nd Airborne Division

JFK Center for Military Assistance

101st Airborne Division (Air Assault) Ft. Campbell, Kentucky

Figure III-1

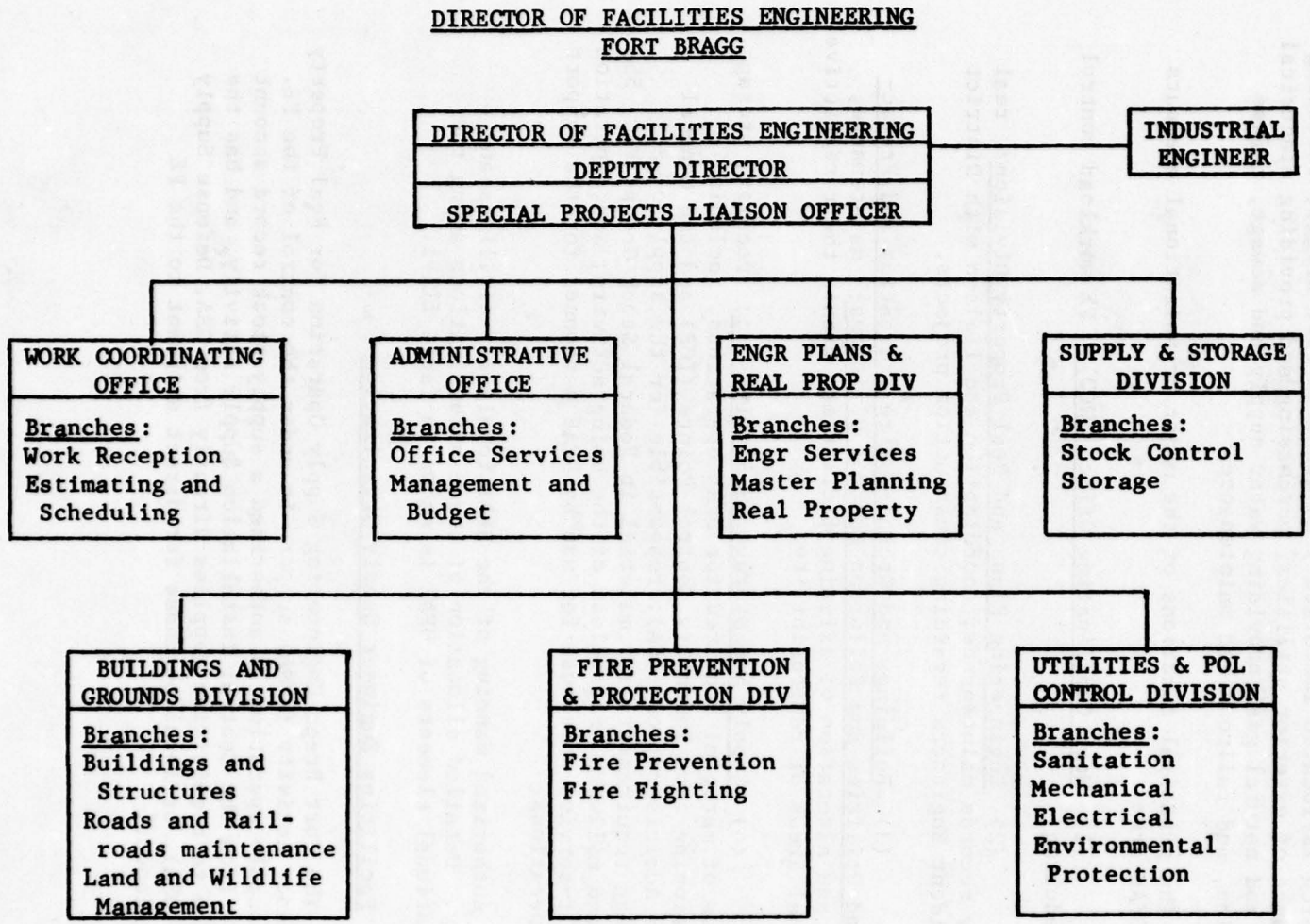

DIRECTOR OF FACILITIES ENGINEERING
FORT BRAGG
DIRECTOR OF FACILITIES ENGINEERING
DEPUTY DIRECTOR
SPECIAL PROJECTS LIAISON OFFICER
INDUSTRIAL ENGINEER
WORK COORDINATING OFFICE
Branches:
Work Reception
Estimating and Scheduling
ADMINISTRATIVE OFFICE
Branches:
Office Services
Management and Budget
ENGR PLANS & REAL PROP DIV
Branches:
Engr Services
Master Planning
Real Property
SUPPLY & STORAGE DIVISION
Branches:
Stock Control
Storage
BUILDINGS AND GROUNDS DIVISION
Branches:
Buildings and Structures
Roads and Railroads maintenance
Land and Wildlife Management
FIRE PREVENTION & PROTECTION DIV
Branches:
Fire Prevention
Fire Fighting
UTILITIES & POL CONTROL DIVISION
Branches:
Sanitation
Mechanical
Electrical
Environmental Protection

Figure III-2

(2) a portion of the total FE support for Pope Air Force Base (which is located immediately adjacent to Fort Bragg), including maintenance of exterior utilities, purchasing and providing electrical service and natural gas, providing water supply and sewage, refuse collection, and railroad bed maintenance.

The principal functions of the major organizational elements of the DFAE are:

(1) Work Coordinating Office (WCO): FE workload control and scheduling.

(2) Engineering Plans and Real Property Division: real property records maintenance; coordination and liaison with District and Resident Engineers regarding construction projects.

(3) Buildings and Grounds, Fire Prevention and Protection, and Utilities and Pollution Control Divisions: maintenance, repair, and alteration of existing facilities, within their respective functional areas of responsibility.

(4) Supply and Storage (S&S) Division: receipt, storage, and issue of materiel required for DFAE operations, including requisitioning from Inventory Control Points (ICP) and the General Services Administration (GSA); responsible for the supply of all Fort Bragg requirements for materiel in Federal Stock Group (FSG) 55, lumber and millwork, regardless of the using activity; and, operation of a self-service warehouse for use by DFAE personnel for the support of FE operations.

Authorized manning of the DFAE totals 617 civilians and 5 military. Detailed allocation of these authorizations among the organizational elements of DFAE is shown in Table III-1.

3. Facilities Engineer Supply Organization

The Fort Bragg Engineering Supply Operation for Real Property Maintenance Activity (RPMA) support is under the control of the FE. The FE supply operation is authorized a supply stock record account separate from the Central Installation Supply activity, and has the authority to requisition supplies directly from GSA, Defense Supply Agency (DSA), or local purchase for direct shipment to the FE Supply Account.

Table III-1

DIRECTORATE OF FACILITIES ENGINEERING
AUTHORIZED CIVILIAN MANNING
FORT BRAGG

| ORGANIZATIONAL ELEMENT | AUTHORIZATION[1/] |
|---|---|
| Office of the DFAE | 2 |
| Admin Division | 11 |
| Work Coordinating Office | 17 |
| Engineering Plans & Real Property | 32 |
| Supply & Storage Division | 26 |
| Fire Prevention & Protection | 63 |
| Buildings & Grounds Division | |
| Office of Chief & Branch Chiefs | 7 |
| Carpenter Shop | 50 |
| PM & Self Help Center | 32 |
| Painting Section | 12 |
| Metal Working Section | 7 |
| Entomology Section | 13 |
| Forestry Section | 15 |
| Wildlife Section | 4 |
| Grounds Section | 23 |
| Pavements Section | 25 |
| Maint of Svc Eqpt Section | 21 |
| Utilities & Pollution Control Div | |
| Office of Chief & Branch Chiefs | 7 |
| Reclamation Section | 2 |
| Pollution Abatement Section | 0 |
| Refrig & Spec Equip Section | 28 |
| Heating & A/C Section | 44 |
| Heat Plants | 41 |
| Water Plant | 14 |
| Sewage Plant | 11 |
| Water & Sewage Maint Section | 39 |
| Refuse Collection | 20 |
| Ext Electric Section | 12 |
| Int Electric Section | 27 |
| Womack Maint Section | 12 |
| Total DFAE | 617 |

Source: Field Research

1/ Does not include the military authorization of 1 Officer (Director) and 4 enlisted men.

As described above, the DFAE organization contains its own supply capability, the S&S Division, whose organization is shown in Figure III-2.

Major functions of the Stock Control Branch are:

(1) maintenance of accountable stock records, receipt and issue vouchers, and similar documentation.

(2) maintenance of the Property Book for equipment assigned to DFAE.

(3) procurement, within limitations, of local purchase materiel to meet DFAE requirements.

(4) preparation of requests for issue of materiel which is obtained from the Installation Supply Office.

(5) preparation of purchase requests for submission to the installation Purchasing and Contracting Office for items which exceed DFAE procurement limitations.

Major functions of the Storage Branch are:

(1) receipt, storage and issue of materiel required by DFAE for repair and utilities operations.

(2) operation of a self-service warehouse for the issue of materiel to DFAE shop personnel.

(3) operation of an over-the-counter issue facility to support troop and family housing and self-help requirements.

DFAE S&S Division is authorized 28 manpower spaces as shown in Table III-2. Twenty-six personnel are assigned, with 2 spaces recognized as required but not authorized to be manned.

The Directorate of Industrial Operations (DIO) Procurement Division has collocated four procurement personnel within the Stock Control Branch to support local purchase resupply and Bill of Materials (BOMs) requirements for local purchase of emergency requests for service orders which require immediate attention.

Table III-2

S&S DIVISION MANPOWER AUTHORIZATIONS
FORT BRAGG

| Title | Quantity | Grade |
|---|---|---|
| Supply Office | | |
| Supply Officer | 1 | GS-11 |
| Asst Supply Officer | 1 | GS-10 |
| Total | 2 | |
| Stock Control | | |
| Supply Clerk (Property Book) | 1 | GS-05 |
| Supply Clerk | 1 | GS-04 |
| Supply Clerk (Typing) | 3 | GS-04 |
| Supply Clerk (Card Punch) | 1 | GS-03 |
| Accounts Maint Clerk | 1 | GS-05 |
| Accounts Maint Clerk | 1 | GS-04 |
| Utilities Sales Officer | 1 | GS-07 |
| Total | 9 | |
| Storage Branch | | |
| Supervisor Supply Technician | 1 | GS-07 |
| Supply Clerk (Typing) | 1 | GS-04 |
| Supply Clerk | 8 | GS-03 |
| Electrical Inspector | 1 | WG-11 ($6.31 per hr) |
| Warehouseman | 1 | WG-07 ($5.05 per hr) |
| Motor Vehicle Operator | 1 | WG-07 ($5.05 per hr) |
| Laborer | 2 | WG-03 ($3.80 per hr) |
| Total | 15 | |

Source: Field Research

4. Installation Procurement and Supply Organization

Materiel support to the DFAE is also provided by the Fort Bragg post procurement and supply organizations. Both these organizations are located within the DIO. The organization of this Directorate is shown in Figure III-3.

The post Procurement Division is responsible for advertising and negotiating all construction and services contracts, and procuring all supplies authorized for local procurement. Insofar as DFAE is concerned, this function is performed by four members of the Procurement Division who are physically located within the S&S Division of DFAE.

DIRECTORATE FOR INDUSTRIAL OPERATIONS
FORT BRAGG

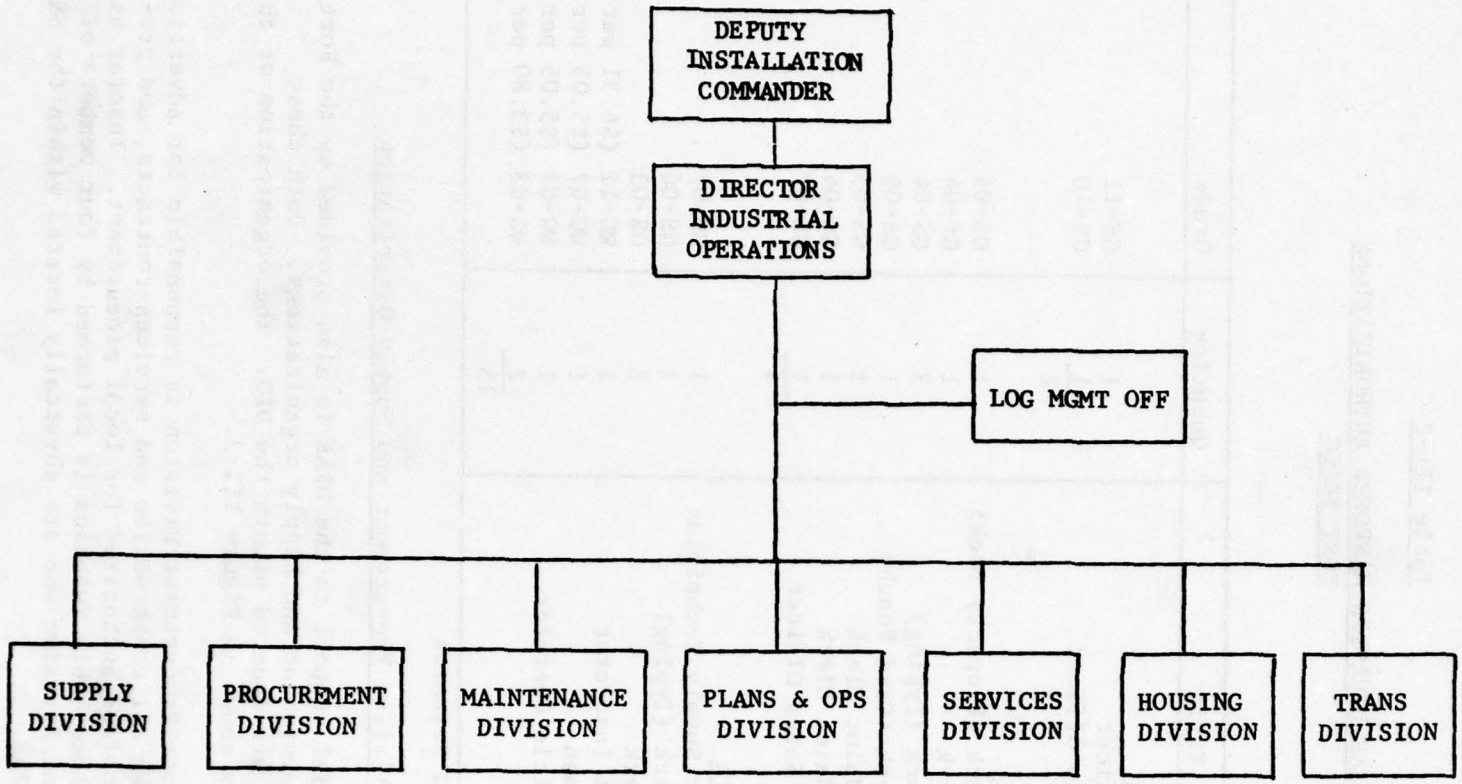



Figure III-3

Fort Bragg Regulation Number 10-8, dated August 1975, states that the Stock Control Branch "Coordinates and purchases, within limitations, all local procurement type items for the Directorate of Facilities Engineering and troop issue." Actually, personnel from the Engineer Purchasing Branch of the Procurement Division in the DIO do the purchasing for the FE. The Engineer Purchasing Branch is collocated with the Stock Control Branch of the S&S Division in the DFAE. The organization of the Procurement Division is as shown in Figure III-4.

The numbers, grades, and annual salaries of personnel in the Engineer Purchasing Branch are as follows:

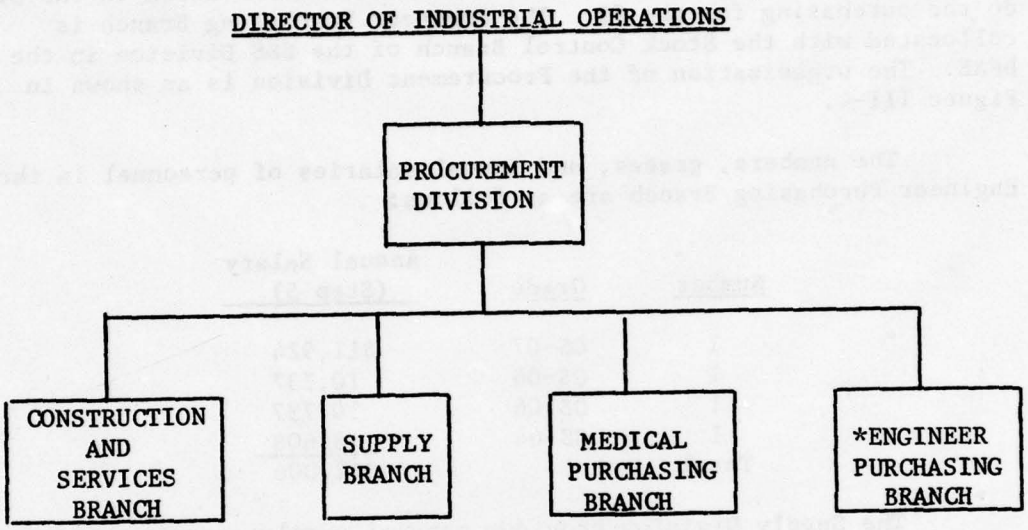
| Number | Grade | Annual Salary (Step 5) |
|---|---|---|
| 1 | GS-07 | $11,924 |
| 1 | GS-06 | 10,737 |
| 1 | GS-06 | 10,737 |
| 1 | GS-04 | 8,608 |
| Total | | $42,006 |

The Supply Division provides general supply support to post activities, as well as providing specialized supply support in the areas of ammunition and clothing sales. The major portion of DFAE supply support is provided by the DFAE S&S Division. However, the following types of materiel were identified as being obtained by DFAE from the post Supply Division: safety shoes and glasses for individual issue; motor vehicle parts (such as filters, tire and tubes, and batteries) for use on DFAE-owned vehicles; chemicals (such as insecticides) also used by other post organizations; and, wire and cable.

5. Basic Supply Statistics

| | |
|---|---|
| Line Items | |
| Ft Bragg Total | |
| DFAE | 4500 (est) |
| Demand Value | |
| Ft Bragg Total | $92.7 Million |
| DFAE | 6.1 Million |
| Inventory Value (a/o 30 Jun 75)($000) | |
| Ft Bragg Total | $12,230.4 |
| DFAE | 603.8 |
| Procurement Value | |
| Ft Bragg Total | $77.1 Million |
| DFAE | 3.0 Million |
| Local Purchase | (2.2 Million) |
| GSA Stores | (0.4 Million) |
| DCSC (Lumber) | (0.4 Million) |

PROCUREMENT ORGANIZATION
FORT BRAGG




* Collocated with DFAE S&S Division.

Figure III-4

6. Local Purchase Costs

Table III-3 reflects the estimated personnel costs for procurement of FE supplies.

Table III-3

ANNUAL PERSONNEL COSTS

| Organizational Element | Annual Salary |
|---|---|
| Engineer Purchasing Branch | $42,006 |
| DIO Procurement Division | 18,529 |
| Installation F&AO | 19,264 |
| Pick-up & Delivery | 13,645 |
| | $93,444 |

7. Operating Costs

DFAE expenditures over FY 1974 and 1975, and projected expenditures for FY 1976 are as follows ($000):

| | FY 1974 | | FY 1975 | | FY 1976 (Est) | |
|---|---|---|---|---|---|---|
| | $ | % | $ | % | $ | % |
| Utilities | $5,593 | 33.6% | $9,755 | 38.4% | $9,476 | 37.6% |
| Contracts | 1,199 | 7.2 | 3,652 | 14.4 | 4,237 | 16.8 |
| Supplies | 2,369 | 14.2 | 3,643 | 14.4 | 2,638 | 10.5 |
| Personnel | 7,488 | 45.0 | 8,337 | 32.8 | 8,855 | 35.1 |
| Total | $16,649 | 100.0% | $25,387 | 100.0% | $25,206 | 100.0% |

Annual operating costs (i.e., salaries) of the S&S Division of DFAE are approximately $250,000.

B. FACILITIES ENGINEER DATA

1. Functions and Operations

a. Workload. The FE workload generates in three forms:

(1) Service Orders (SOs). The service order type jobs consist mainly of call-in requirements for unplanned or emergency type work which should not exceed 16 man-hours or a $200 expenditure limit. Each service order is reviewed and approved by a shop foreman.

(2) Standing Operating Orders (SOOs). These work order requests consist of a fixed requirement for maintenance performed on specific equipment or facilities at specified times (refrigeration, utilities, power plants, etc.). These jobs may include minor maintenance/repair of equipment which required the use of bench stock items or items from FE supply stocks. However, routine preventive maintenance operations with known, large manpower requirements are generally accomplished by contract.

(3) Individual Job Orders (IJOs). These work order requests are for jobs which exceed the service order request. The requests fall into two categories: minor construction or maintenance and repair. IJOs generally are based on work requests submitted by requiring organizations.

b. Scheduling

Scheduling actions, which are primarily related to IJOs, take place in the WCO of the DFAE. The key characteristics of the IJO scheduling is that this is not done until all the materiel required for the job is available and has been reserved for the job. Exception to this policy is made only for emergency requirements, as identified by the chief of the WCO. Such action is rarely taken, and the scheduler could not remember the last such job.

The shop foremen estimate the amount of time which should be reserved for emergency work, and the balance of the available man-hours are used for the scheduling of IJOs. Each Thursday the scheduler contacts the shop foremen regarding the status of jobs already assigned to the shop. This carryover of uncompleted work determines the number of man-hours available for new work.

2. Supply Support

a. Standing Operating Orders (SOOs)

SOOs represent periodic maintenance requirements, and the materiel to support this workload is estimated by the shop foremen, and ordered as a specific quantity. This materiel is issued to the shop as soon as it is available, and held by the shop for the accomplishment of this work effort. A SOO issued by the WCO covers this work effort, and the ordered materiels are issued against this order.

Materiel to support SOOs may be treated as an additive requirement each time it is identified, or it may be added to the demand base for the computation of the requirements objective.

b. Individual Job Orders (IJOs)

Materiel to support IJOs is specifically identified, collected, and held for that purpose. The Planner-Estimaters within the WCO are responsible for developing the BOMs, in support of IJOs. These BOMs are intended to identify the complete materiel requirements of the job, and are also intended to be a fairly accurate estimate of the materiel costs of the job. These estimates are expected to be within 10% of the actual materiel cost. The Planner-Estimaters may actually call suppliers to develop an accurate price for the BOM. If this is done, the BOM may identify the supplier and a manufacturer's name and part number for the needed item, although this is not a mandatory requirement. An examination of three available BOMs showed

the following: of five items on one BOM, three contained part number identification and the others were materiel (e.g., sheetrock, nails); of ten items on a second BOM, the one repair part was identified with a part number; and, of the 45 items on the third BOM, the six repair parts were identified with part numbers. There were no National Stock Numbers (NSNs) shown on any of the BOMs reviewed. There was no catalog available to the Planner-Estimaters listing items stocked in the DFAE warehouse, although these items were expected to be listed on BOMs in preference to nonstocked items; however, the Team was advised that the Planner-Estimaters know the warehouse contents even without such a catalog.

After the IJO, with its associated BOM has been approved by the chief of WCO, it is forwarded to the Materiel Coordinator. That individual (one person is assigned to this function full-time) is responsible for obtaining all materiel required to support an IJO, before the job is scheduled. The Materiel Coordinator takes the approved BOM to the DFAE warehouse where he physically picks required items from stock. (There is no file showing stock location, and the stock-picking job is accomplished by moving through the warehouse to locate desired items, supported by the individual's knowledge of the warehouse layout and the positioning of items; similarly, there is no file giving asset information, and the availability of stock is determined by a physical check of the bin in which it is intended to be located.) This materiel is moved to a staging area within the DFAE which contains only materiel being collected for the support of BOMs. Bulky items generally available in DFAE stocks (e.g., wallboard, galvanized pipe, masonite) are not moved to the staging area but are annotated on the BOM as being available from DFAE stocks. DFAE assets are in the Forces Command (FORSCOM) Stock Fund, and this stock fund is reimbursed by Operations and Maintenance (O&M) funds when materiel is staged to support a BOM.

The Materiel Coordinator annotates the BOM to identify items which have been "staged" for support of the IJO, and those which are not available in DFAE stocks. Unavailable items are marked "LP" (local purchase) by the Materiel Coordinator, although this is not intended to require that such items be locally purchased. Annotated copies of the BOM are furnished to the S&S Division for acquisition action in accordance with the "Date Materiel Required" (DMR) information placed on the BOM by the Materiel Coordinator. This DMR is based on either the date the job is required by the customer (information which is furnished to the Materiel Coordinator) or on the estimated acquisition leadtime of the items which were not available from DFAE stocks. No information on the availability of shop manpower, or on when the job is likely to be scheduled, is used in establishing the DMR for the acquisition of unavailable materiel.

When materiel is procured to support a BOM, the purchase order identifies the IJO involved, and the receiving function in DFAE supply advises the Materiel Coordinator when the shipment is received. However, for materiel which is ordinarily carried in stock, there is no system by which to advise the Materiel Coordinator when the replenishment quantity has been received, and the Coordinator must periodically check the bins to complete the BOM.

3. BOM Statistics

As of 30 September 1975:

(1) Incomplete BOMs:

(a) Number: 27

(b) Staged Inventory: $19,054

(c) Materiel to be drawn from DFAE Warehouse Stocks: $1,683

(d) Due-In: $55,896

(2) Completed BOMs awaiting scheduling:

(a) Number: 14

(b) Staged Materiel: $6,344

(c) Materiel to be drawn from DFAE Warehouse Stocks: $2,990

C. FACILITIES ENGINEER SUPPLY

1. General

The FE Supply Account at Fort Bragg is classified as a stock fund account. Materiel requisitioned through the FE Supply Account falls into two categories: stocked items and nonstocked items.

a. Stocked Items. These items are carried on supply records and are stored in the S&S Division warehouse self-service center. Stock requirements are based on usage history by the various FE shops. Stocked items are considered as stock fund materiel and are not expended to FE until formal issue requests are received. O&M funds are then used to reimburse

the Command Stock Fund accounting system at FORSCOM. Reimbursements to local supply stock fund is not accomplished at base level. The Command Stock Fund will reallocate additional stock funds as necessary based on the rebudgeting cycle.

b. Nonstocked (Fringe) Items. These items are not carried or stocked in FE supply accounts. Nonstocked items are those items required for special requirements of a nonrecurring nature (BOMs, Emergency Work Orders, Special Projects, etc.). Usually, unit O&M funds are cited when materiel is requisitioned or procured. As materiel is received it is forwarded direct to the requesting activity or the central materiel holding area (BOMs) until a work release date from the FE scheduling activity is received.

2. Supply Sources

a. Off-Post Sources. FE supplies requisitioned and carried in the FE Supply Account include construction materiel, general hardware, RPMA parts, and hand tools used in the maintenance of real property mission. As a general rule, repair parts for commercial equipment maintained by the FE to support the RPMA mission are purchased from local sources by using the applicable FE Stock Fund Account or installation operating funds (O&M). Currently, approximately 73% of the materiel used by the FE RPMA program is obtained through these local purchase sources. GSA source procurements account for 25%, while ICP source requisitions account for 2% and were for lumber products only. Dollar value of requisitions to provide supplies for the FE RPMA program during FY 1975 is categorized by source as follows:

| Source | Value |
|---|---|
| Local Purchase | $2,200,000 |
| GSA | 354,000 |
| ICP (lumber products - DCSC) | 446,000 |
| Total Acquisition | $3,000,000 |
| **Issues** | |
| Used by DFAE | $2,700,000 |
| Issues to others and DFAE resupply | 300,000 |
| Total | $3,000,000 |

b. On-Post Sources. The FE on-post supply operation is operated under the U.S. Army Self-Service Supply concept. All stocks in support of the FE RPMA mission are stored/stocked within

a central outlet facility that is located within the FE maintenance complex. Approximately 4,500 line items of stock are maintained by FE supply operation. These stocks primarily consist of expendable materiel used in the RPMA mission requirements. The FE supply operation obtains all supplies to support the RPMA operation at Fort Bragg. Line item accounting is not maintained for materiel on hand. All adjustments to stock fund account are under a dollar value accounting system. Bin and warehouse locator cards, with identifying numbers annotated thereon, are the primary means for identifying materiel; no stock numbers, other than those on GSA stocked materiel, are carried in the account. As materiel is received from the vendor and GSA, it is identified and stocked by bin/locator number, and made available for self-service selection by FE maintenance personnel.

(1) Self-Service Store. The self-service store outlet is a manual accounting operation which contains all FE warehouse stocks and is arranged in such a manner so that physical selection of items for approved work orders can be made by designated shop maintenance personnel. The layout of stocks is such that substitution of items can be made easily if the desired item(s) are not available. As materiel is released by the service store, shop personnel sign an issue document indicating receipt of items, and individual bin cards are posted accordingly. A copy of the issue document is forwarded to installation Finance and Accounting for appropriate billing of O&M funds to reimburse the Command Stock Fund.

(a) Stockage Objective. A seventy-five day stock level (60 day operating level plus 15 days safety level) is authorized. To authorize an item for stock, at least three demands in the past 90 days must be recorded, and a foreseeable continuing requirement must be documented. Seasonal items are also stocked, with quantities varying according to past usage and anticipated requirements for the coming season.

(b) Reorder Procedure. As materiel is issued, bin cards are manually posted. As the quantity for reorder is reached, a reorder card is forwarded to stock control for local purchase or requisition from GSA. After purchase or requisition action, the reorder card is returned to the warehouse and filed pending receipt of the materiel. All supply transactions are manually prepared. Part numbers and nomenclature taken from the bin cards are used to obtain materiel for stock. No local research capability exists for item information since all materiel stocked in the Sales Store is considered to be either local purchase materiel, or is obtained from GSA. All requests for replenishment of stock are processed

through the FE supply officer for approval or disapproval of purchase. The supply officer reviews each replenishment request and determines whether local purchase action or GSA requisitioning is the approved source. Review of stock records did not indicate that any ICP requisitions have been transmitted to the ICP for stock numbered items, other than lumber products.

(2) Shop Bench Stocks. These items consist of a 15-day stock of expendable, fast moving items as determined by the shop foreman and approved by the DFAE. These stocks are located in the immediate shop area and are controlled by the shop foreman to support repetitive minor service call requirements. Five maintenance bench stock areas have been established to support the RPMA operation. The shop foreman or his designated representative is authorized to draw bench stock items from the self-service store upon submission of an appropriate DA Form 3161 (Request for Issue or Turn-In). The respective shop O&M funds are used to reimburse Army Stock Funds at the time items are issued to shop bench stock.

3. Issues

The work coordinating office in the FE operation originates and controls all work order requests for the RPMA operation. Several procedures exist by which the FE workman or shop may obtain supplies to accomplish the RPMA mission. These are briefly discussed as they relate to the type of work:

a. Service Orders: Each request is reviewed and approved by the shop foreman prior to release to obtain materiel from supply. Materiel available in shop bench stock or the self-service outlet is issued immediately to satisfy FE requirements. Items not in stock are processed to the warehouse procurement clerk for immediate local purchase.

b. Standing Operating Orders: Supplies are provided to the shop mechanics upon approval of the shop foreman. As materiel is issued, it is charged to the respective shop, and the Command Stock Fund is reimbursed from appropriate O&M funds.

c. Individual Job Orders: Upon approval of an IJO the estimator prepares a BOM and forwards the documents to the FE Materiel Coordinator who obtains supplies either from the FE self-service store or through subsequent local purchase actions by the FE supply officer and procurement personnel. Stock funds are used to procure the BOM supplies. As BOM supplies are obtained from the self-service store, or from local purchase sources and placed in the BOM holding area, FE O&M funds are charged and reimbursement to Command Stock Fund is effected. The shop Materiel Coordinator

insures that supplies are placed in the holding areas, supplies are appropriately tagged to BOM projects, and monitors receipt of materiel. When BOMs are complete, he informs the WCO that job order is available for scheduling by shop foreman.

4. Excesses

Self-service store personnel continually check store bin cards and count quantities remaining in the bins. Every 90 days, reorder points are recomputed with excesses annotated on the bin cards. Excesses are also identified when reordering is accomplished during the normal operating period. Every 90 days a listing of excess items is prepared and forwarded to FORSCOM, Engineer Analysis Division, for redistribution within the command. If items cannot be redistributed, disposal action thru Defense Property Disposal Office (DPDO) is authorized within 30 days after receipt of no command requirement.

D. INSTALLATION PROCUREMENT

1. Local Purchase Methods

The following methods are used by the Engineer Purchasing Branch to make local purchases.

a. Blanket Purchase Agreements (BPAs) are established with 54 vendors in and around the area of Fayetteville, N.C. to buy FE supplies. BPA purchases are authorized to $500 without competition, and between $500 and $2,500 with competition.

b. Purchase Orders may be used in lieu of BPAs for purchases under $2,500 where there is a desire to bind the contractor with a formal contract. For purchases from $2,500 to $10,000, purchase orders must be used.

c. Delivery Orders are used for purchases under established contracts with dollar value specified by the contract.

2. Local Purchase Costs

The expenditures for local purchase during Fiscal Year 1975 was $2,200,000.

Local purchase of supplies for the FE supply operation is accomplished by the four procurement clerks located in Supply. About 50 BPAs have been established to support FE requirements.

Purchases up to $500 are authorized without competitive bidding; while two or more bids are required for quantities with a dollar value range of $500 to $2,500. Delivery of supplies to support FE requirements was reported as excellent with most items delivered prior to the established required delivery dates.

Funding purchases is done by the Engineer Purchasing Branch from an acquisition authority. This authority is furnished quarterly to the Purchasing Branch where a record of expenditures is kept to ensure the authority is not exceeded. A monthly report of the balance of the authority is furnished to the S&S Division supervisor. If the acquisition authority runs low before the end of the quarter, the S&S Division supervisor is informed and adjustments are made to increase the authority or suspend buying.

Table III-4 shows a sampling of BPA transactions with one contractor outside a 50 mile radius, and five contractors within a 50 mile radius of Fort Bragg. Twenty transactions were selected at random from each contractor to determine the number of line items per transaction, and the number of days it took to receive all items. For the contractor outside the 50 mile radius, an average of 1.3 items were purchased in an average time of 15.85 days per transaction. For the contractors within the 50 mile radius, an average of 2.13 items were purchased in an average time of 15.11 days per transaction.

Table III-5 shows a sampling of 40 purchase orders and delivery orders, and information pertinent to each transaction. Of particular interest are the columns entitled "Number days to order" and "Number of days to delivery." The first column highlights the number of days the P&C Office held a requirement before placing a firm PO/DO on the vendor. The second column highlights the number of days from receipt of the requirement by P&C until delivery by the vendor. For example, the first item was a delivery order for ready mix concrete. The order was placed by the Purchasing Branch the same day that the documentation was received that requested the item. The next column shows that the concrete was delivered six days after the documentation was received by the Purchasing Branch. For the forty transactions, the average time that documentation was in the Purchasing Branch before ordering was 10.4 days. The average time it took to receive the supplies after the Purchasing Branch received the requesting documents was 24.9 days.

Table III-4

SAMPLE OF BPA TRANSACTIONS
FORT BRAGG

| Outside 50 Mi Radius | | Within 50 Mi Radius | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Noland Supply Co. | | W. L. Smith | | Mack's Wholesale Electric Co. | | Highland International Trucks & Equip | | Hyman Supply Co. | | McDonald Lumber Co. | |
| Items On Order | Days To Deliver | Items | Days | Items | Days | Items | Days | Items | Days | Items | Days |
| 2 | 1 | 1 | 3 | 1 | 1 | 2 | 3 | 1 | 19 | 1 | 22 |
| 1 | 9 | 1 | 1 | 4 | 2 | 2 | 3 | 1 | 1 | 2 | 9 |
| 1 | 29 | 2 | 1 | 3 | 2 | 1 | 4 | 1 | 1 | 2 | 13 |
| 1 | 29 | 1 | 6 | 1 | 4 | 2 | 6 | 1 | 1 | 2 | 166 |
| 1 | 1 | 1 | 49 | 1 | 50 | 1 | 10 | 1 | 1 | 1 | 23 |
| 1 | 78 | 1 | 10 | 1 | 7 | 2 | 1 | 1 | 27 | 1 | 20 |
| 1 | 8 | 2 | 22 | 1 | 1 | 8 | 1 | 8 | 27 | 1 | 21 |
| 1 | 10 | 1 | 7 | 1 | 1 | 5 | 1 | 1 | 1 | 1 | 6 |
| 1 | 78 | 2 | 5 | 1 | 1 | 1 | 7 | 4 | 13 | 2 | 5 |
| 2 | 6 | 2 | 16 | 1 | 9 | 1 | 1 | 4 | 11 | 1 | 1 |
| 4 | 3 | 1 | 38 | 1 | 21 | 3 | 1 | 1 | 30 | 1 | 7 |
| 1 | 5 | 1 | 28 | 2 | 33 | 1 | 5 | 6 | 24 | 3 | 3 |
| 1 | 1 | 5 | 190 | 2 | 1 | 2 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 4 | 18 | 2 | 4 | 5 | 7 | 1 | 21 | 1 | 1 |
| 1 | 21 | 2 | 12 | 1 | 1 | 3 | 6 | 1 | 28 | 2 | 1 |
| 1 | 5 | 1 | 46 | 3 | 1 | 1 | 5 | 1 | 29 | 1 | 6 |
| 1 | 1 | 3 | 55 | 1 | 11 | 4 | 1 | 7 | 13 | 1 | 1 |
| 1 | 1 | 2 | 42 | 1 | 1 | 8 | 22 | 1 | 12 | 1 | 1 |
| 2 | 1 | 1 | 39 | 1 | 2 | 18 | 16 | 1 | 5 | 1 | 5 |
| 1 | 29 | 1 | 46 | 1 | 27 | 5 | 20 | 2 | 7 | 1 | 19 |
| 26 | 317 | 35 | 634 | 30 | 180 | 75 | 121 | 45 | 272 | 27 | 331 |

| Outside 50 Mile Radius | | Within 50 Mile Radius | |
|---|---|---|---|
| Total Item | Total Days | Total Item | Total Days |
| 26 | 317 | 212 | 1538 |
| 1.3 | 15.85 Average | 2.12 | 15.38 Average |

Source: Field Research

## Table III-5

## FISCAL YEAR 1975 PO/DO COMPARISONS
## FORT BRAGG

| Item Identification | No. Items | Total Value | Quantity 1st Item | Unit Price | Number of Days to Order | Number of Days to Delivery |
|---|---|---|---|---|---|---|
| Concrete, Ready Mix** | 1 | $318.00 | 12 cu.yd. | $26.50 | 1 | 6 |
| Concrete, Ready Mix** | 1 | 185.50 | 7 cu.yd. | 26.50 | 1 | 2 |
| Concrete, Ready Mix** | 1 | 742.00 | 28 cu.yd. | 26.50 | 2 | 8 |
| Concrete, Ready Mix** | 1 | 742.00 | 28 cu.yd. | 26.50 | 1 | 14 |
| Concrete, Ready Mix** | 1 | 2,438.00 | 92 cu.yd. | 26.50 | 1 | 42 |
| Lime | 1 | 1,274.24 | 22 T | 57.92 | 2 | 2 |
| Lime | 1 | 1,390.08 | 24 T | 57.92 | 4 | 5 |
| Lime | 1 | 1,390.08 | 24 T | 57.92 | 1 | 3 |
| Lime | 1 | 1,158.40 | 20 T | 57.92 | 32 | 43 |
| Lime | 1 | 1,158.40 | 20 T | 57.92 | 2 | 40 |
| Asphalt** | 1 | 743.96 | 58.35 T | 12.75 | 1 | 28 |
| Asphalt** | 1 | 601.80 | 47.20 T | 12.75 | 1 | 22 |
| Asphalt** | 1 | 1,752.23 | 137.43 T | 12.75 | 4 | 31 |
| Asphalt** | 1 | 3,212.63 | 251.97 T | 12.75 | 3 | 27 |
| Asphalt** | 1 | 2,825.02 | 221.57 T | 12.75 | 29 | 30 |
| Glass* | 3 | 4,443.50 | 5000 ea | .40 | 1 | 1 |
| Glass** | 1 | 163.20 | 48 ea | 3.40 | 1 | 16 |
| Nozzle* | 3 | 500.00 | 100 ea | 5.00 | 21 | 49 |
| Epoxy Floor Compound* | 1 | 3,350.00 | 10 KT | 35.00 | 1 | 8 |
| Centering Stud w/Nut* | 11 | 378.04 | 4 ea | 1.80 | 2 | 30 |
| Slide - Chlorimeter* | 3 | 71.95 | 4 ea | 14.00 | 18 | 28 |
| Dishes* | 1 | 97.50 | 10 bx | 9.75 | 18 | 36 |
| Pump* | 1 | 245.52 | 3 ea | 81.84 | 12 | 24 |
| Mirror* ** | 1 | 1,900.00 | 400 ea | 4.75 | 1 | 14 |
| Cutter Broom Segments* | 1 | 180.00 | 3 set | 60.00 | 6 | 18 |
| Concrete, Ready Mix* ** | 1 | 916.00 | 40 yd. | 22.90 | 1 | 12 |
| Hook* | 1 | 37.50 | 25 ea | 1.50 | 1 | 14 |
| Marble Oust* ** | 1 | 148.00 | 80 bg | 1.85 | 1 | 8 |
| Lumber* | 1 | 2,430.00 | 3404 BF | - | 1 | 30 |
| Drill Bits* | 11 | 924.30 | 1 ea | 55.10 | 5 | 14 |
| Set Screw * | 7 | 52.88 | 2 ea | .20 | 1 | 10 |
| Kit* | 1 | 97.98 | 2 ea | 48.99 | 6 | 28 |
| Steel Wool Buffing Machine* | 1 | 200.00 | 20 rl | 200.00 | 22 | 36 |
| Bolt* ** | 1 | 30.00 | 300 ea | .10 | 101 | 139 |
| Filter* | 1 | 24.00 | 12 | 2.00 | 11 | 15 |
| Heater* | 1 | 71.40 | 12 | 5.95 | 21 | 32 |
| Plate-Outlet Box* | 1 | 7.51 | 1 | 7.51 | 10 | 39 |
| Adapter* | 6 | 111.02 | 12 | .66 | 67 | 85 |
| Screws* ** | 1 | 26.00 | 4 | 6.50 | 1 | 2 |
| Developer-CD4* ** | 1 | 27.72 | 12 | 2.31 | 1 | 5 |
| | | | | Total Days | 416 | 996 |
| | | | | Average Days | 10.4 | 24.9 |

Source: Field Research

* Purchase Orders ** Vendor location within 50 miles of Fort Bragg.

## CHAPTER IV

## NEW CUMBERLAND ARMY DEPOT

### A. MANAGEMENT DATA

#### 1. Organization and Mission

a. Organization. The U.S. Army New Cumberland Army Depot (NCAD) is organized as portrayed in Figure IV-1.

b. Mission. To operate a supply depot providing for the receipt, storage, issue, maintenance, and disposal of assigned commodities; provide installation support to attached organizations; and operate such other facilities as may be assigned.

c. Major Functions

(1) Supply. Receipt, storage, issue of: General Supplies, DSA Materiel, GSA Strategic and Critical Materiel, Agency for International Development (AID) Materiel, and Air Force Materiel.

(2) Maintenance. Performs depot maintenance of general supplies and construction equipment/components; performs depot level repair, overhaul, and modification of aircraft and aircraft components; provides direct support maintenance to Army War College; and operates a cannibalization point for Army air equipment and chemical Class II and Class IV equipment. Procures raw materials; fabricates hose assemblies, hydraulic hoses, modification kits and various sheet metal components; and performs fabrication, modification and repair of air delivery equipment.

(3) Other Activities. Provides technical training for Active Army and Army Reserve Forces Aviation Maintenance Units; operates field printing plant; provides automated data processing support to include complete ADP and PCM services in support of the U.S. Army Catalog Data Agency (USACDA), the General Materiel and Parts Center (USAGMPC), and the U.S. Army International Logistics Command (USAILCOM), at NCAD, and Army Class Manager Activities (ACMAs) located at Philadelphia (clothing and textiles, and subsistence); processes secondary item visibility data received from the overseas command and CONUS installations; provides administrative and logistical support to approximately 21 tenant/attached activities; and operates a commissary.

Depot authorized manpower data is shown in Table IV-1.



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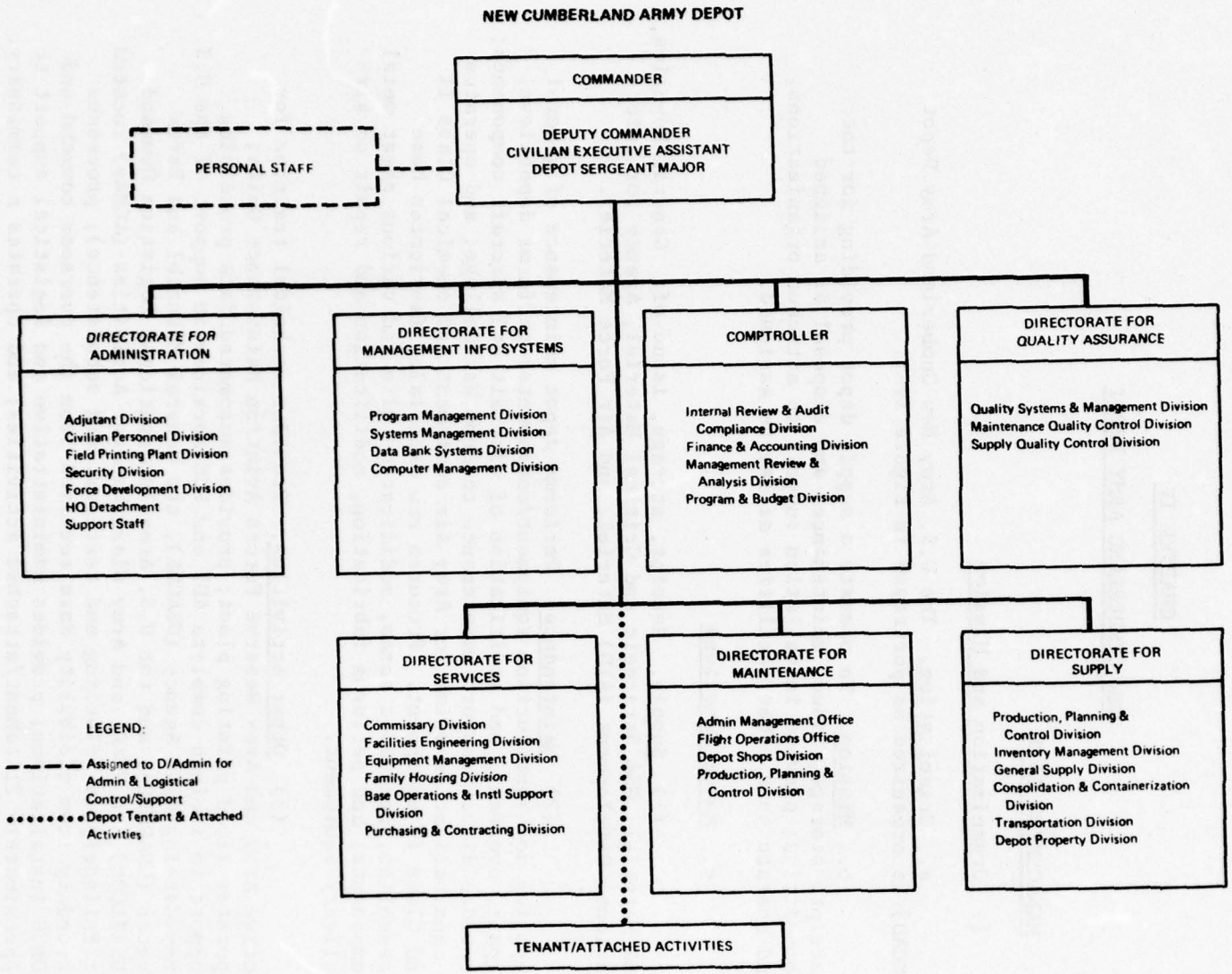

NEW CUMBERLAND ARMY DEPOT
COMMANDER
DEPUTY COMMANDER
CIVILIAN EXECUTIVE ASSISTANT
DEPOT SERGEANT MAJOR
PERSONAL STAFF
DIRECTORATE FOR ADMINISTRATION
Adjutant Division
Civilian Personnel Division
Field Printing Plant Division
Security Division
Force Development Division
HQ Detachment
Support Staff
DIRECTORATE FOR MANAGEMENT INFO SYSTEMS
Program Management Division
Systems Management Division
Data Bank Systems Division
Computer Management Division
COMPTROLLER
Internal Review & Audit Compliance Division
Finance & Accounting Division
Management Review & Analysis Division
Program & Budget Division
DIRECTORATE FOR QUALITY ASSURANCE
Quality Systems & Management Division
Maintenance Quality Control Division
Supply Quality Control Division
DIRECTORATE FOR SERVICES
Commissary Division
Facilities Engineering Division
Equipment Management Division
Family Housing Division
Base Operations & Instl Support Division
Purchasing & Contracting Division
DIRECTORATE FOR MAINTENANCE
Admin Management Office
Flight Operations Office
Depot Shops Division
Production, Planning & Control Division
DIRECTORATE FOR SUPPLY
Production, Planning & Control Division
Inventory Management Division
General Supply Division
Consolidation & Containerization Division
Transportation Division
Depot Property Division
TENANT/ATTACHED ACTIVITIES
LEGEND:
Assigned to D/Admin for Admin & Logistical Control/Support
Depot Tentant & Attached Activities

Figure IV-1

TABLE IV-1

MANPOWER AUTHORIZATIONS
NEW CUMBERLAND ARMY DEPOT

| NCAD | Civilian | Military |
|---|---|---|
| Commander's Staff | 3 | 5 |
| Dir for Admin | 150 | 7 |
| Dir Mgt Info Sys | 212 | 0 |
| Comptroller | 87 | 2 |
| Dir Quality Assurance | 177 | 15 |
| Dir Services | 335 | 3 |
| Dir Maintenance | 944 | 14 |
| Dir Supply | 986 | 26 |
| TOTAL | 2894 | 72 |
| **TENANT AGENCY** | **Civilian** | **Military** |
| ILC | 401 | 10 |
| GMPA | 189 | 2 |
| CDA | 134 | 1 |
| LEA | 117 | 37 |
| OTHER | 148 | 91 |
| TOTAL | 989 | 141 |
| DEPOT POPULATION | 3883 | 213 |

Source: Field Research.

2. Facilities Engineer (FE) Organization

Operation and maintenance of depot facilities is the responsibility of the FE Division of the Directorate for Services.

The Directorate for Services (Figure IV-2) operates and maintains depot facilities; controls utilization of depot equipment; requisitions and manages depot operating supplies and family housing; provides procurement services to assigned tenant activities; and manages the Base Operation (Z) accounts relative to the Army Industrial Fund (AIF).

The basic Facilities Engineering Division (Figure IV-3) Mission at NCAD is: to provide maintenance, care and preservation of all buildings, structures and real estate of the installation; to provide fire prevention and protection; provide for the installation of production equipment; and to provide utilities and other miscellaneous services.

DIRECTORATE FOR SERVICES
NEW CUMBERLAND ARMY DEPOT

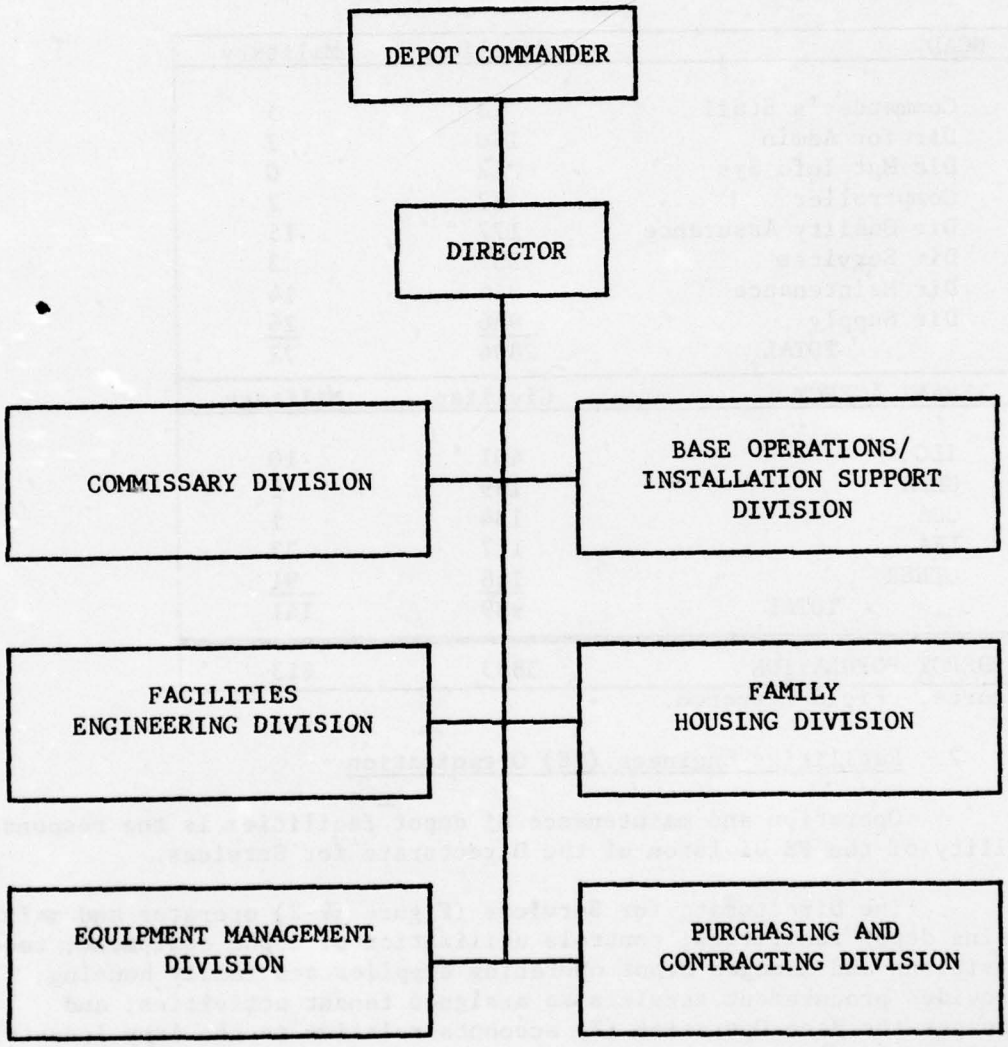



Figure IV-2

FACILITIES ENGINEER DIVISION
NEW CUMBERLAND ARMY DEPOT

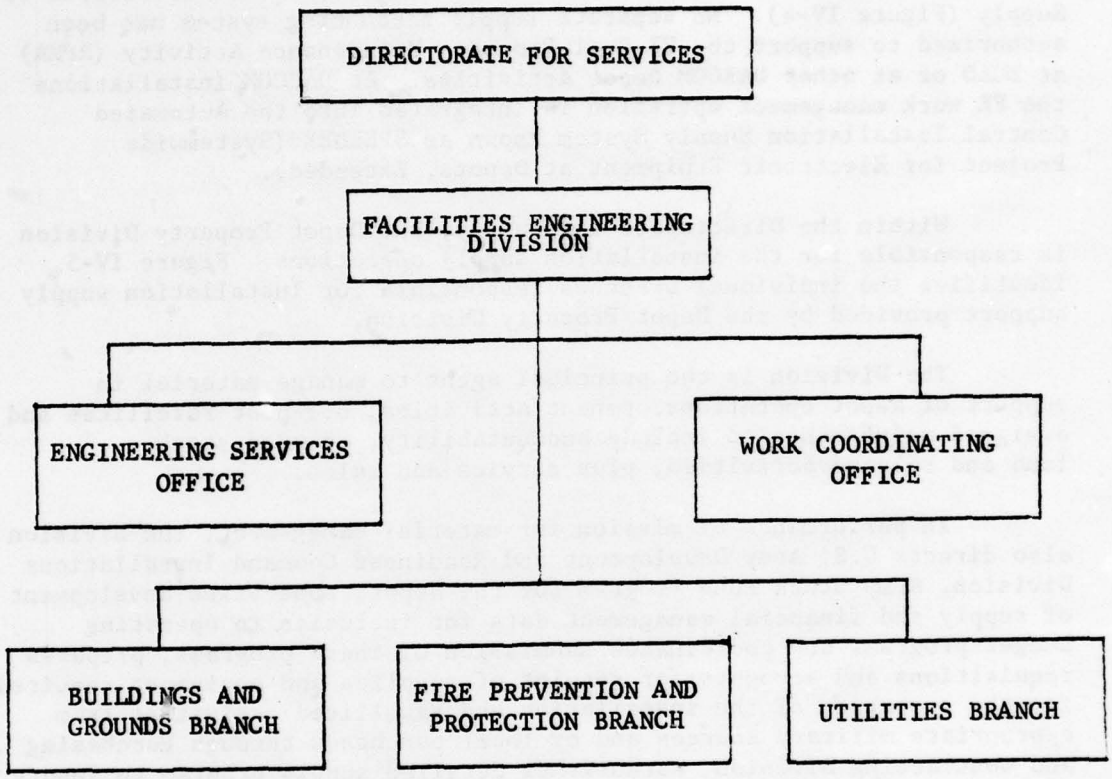



Figure IV-3

3. Central Installation Supply

The installation supply activity which supports the Facilities Engineering Division is operated within a central installation supply concept under the operational control of the Directorate of Supply (Figure IV-4). No separate supply accounting system has been authorized to support the FE Real Property Maintenance Activity (RPMA) at NCAD or at other DARCOM Depot Activities. At DARCOM installations the FE work management operation is integrated into the Automated Central Installation Supply System known as SPEEDEX (Systemwide Project for Electronic Equipment at Depots, Extended).

Within the Directorate for Supply, the Depot Property Division is responsible for the installation supply operations. Figure IV-5 identifies the individual branches responsible for installation supply support provided by the Depot Property Division.

The Division is the principal agent to manage materiel in support of depot operations, tenant activities, off-post satellites and assigned maintenance to include accountability, command stock fund and related activities, plus service and sales.

In performance of mission for materiel management, the Division also directs U.S. Army Development and Readiness Command Installations Division, Army Stock Fund Program for the depot; supervises development of supply and financial management data for inclusion in operating budget programs and coordinates submission of these programs; prepares requisitions and accounts for receipt of supplies and equipment required for the operation of the installation and satellited activities from appropriate military sources and by local purchases through Purchasing and Contracting Division; establishes detailed supply program to insure continuous purification of stocks, determination of authorized requirements, reporting and disposition of all excess, validation and updating of stock accounting and financial records; and maintains formal accountability for all depot property.

4. Central Installation Procurement

Depot procurement (local purchase) is performed by the Purchasing and Contracting Division of the Directorate for Services. The Division is organized and staffed as shown in Figure IV-6.

The Purchasing and Contracting Division mission is to provide purchasing and contracting services for all assigned activities of the installation and to separate activities by agreement. (Contracting officers assigned this division are authorized representatives of the Commanding Officer and the Government for purchasing and contracting,

DIRECTORATE FOR SUPPLY
NEW CUMBERLAND ARMY DEPOT

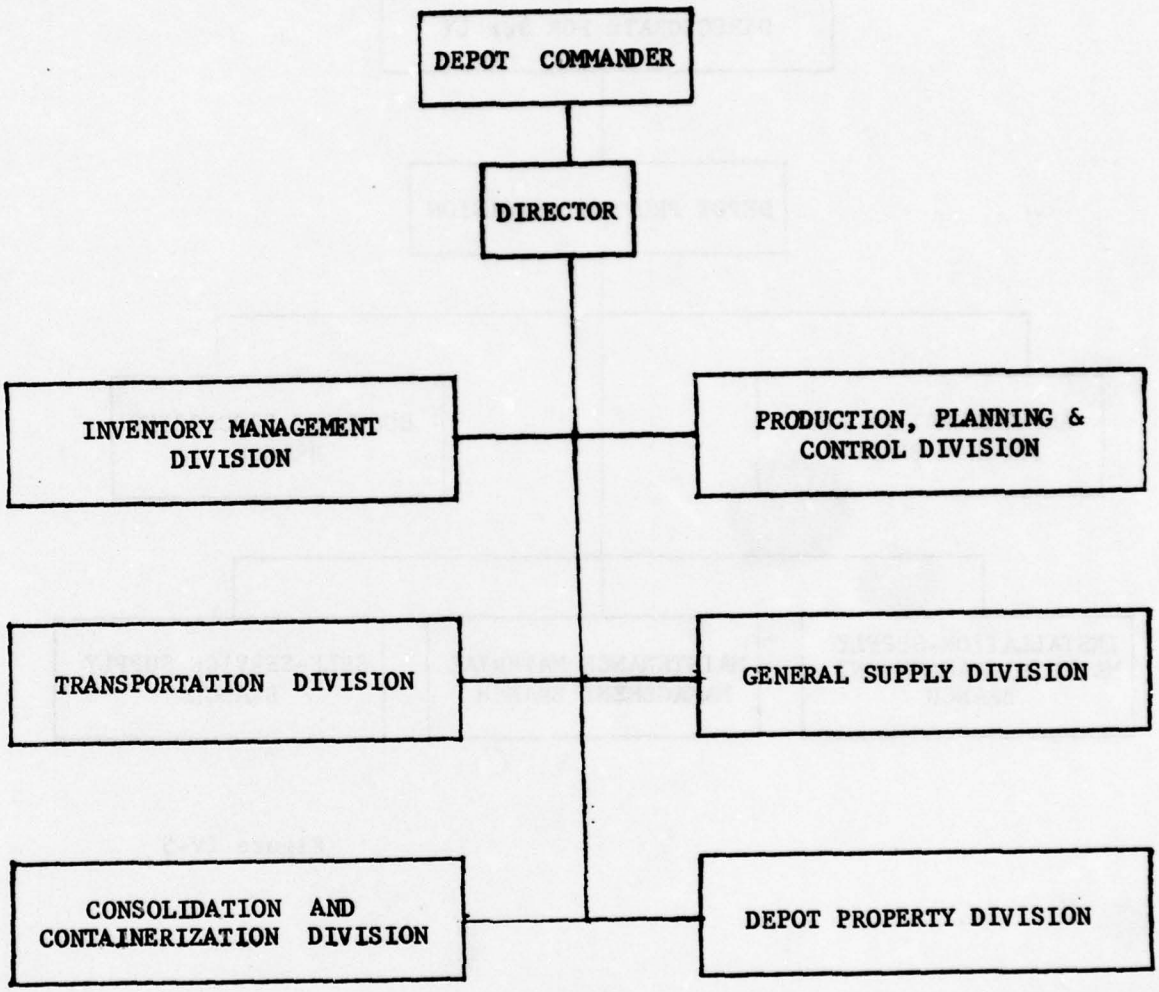



Figure IV-4

**DEPOT SUPPLY ORGANIZATION**
**NEW CUMBERLAND ARMY DEPOT**

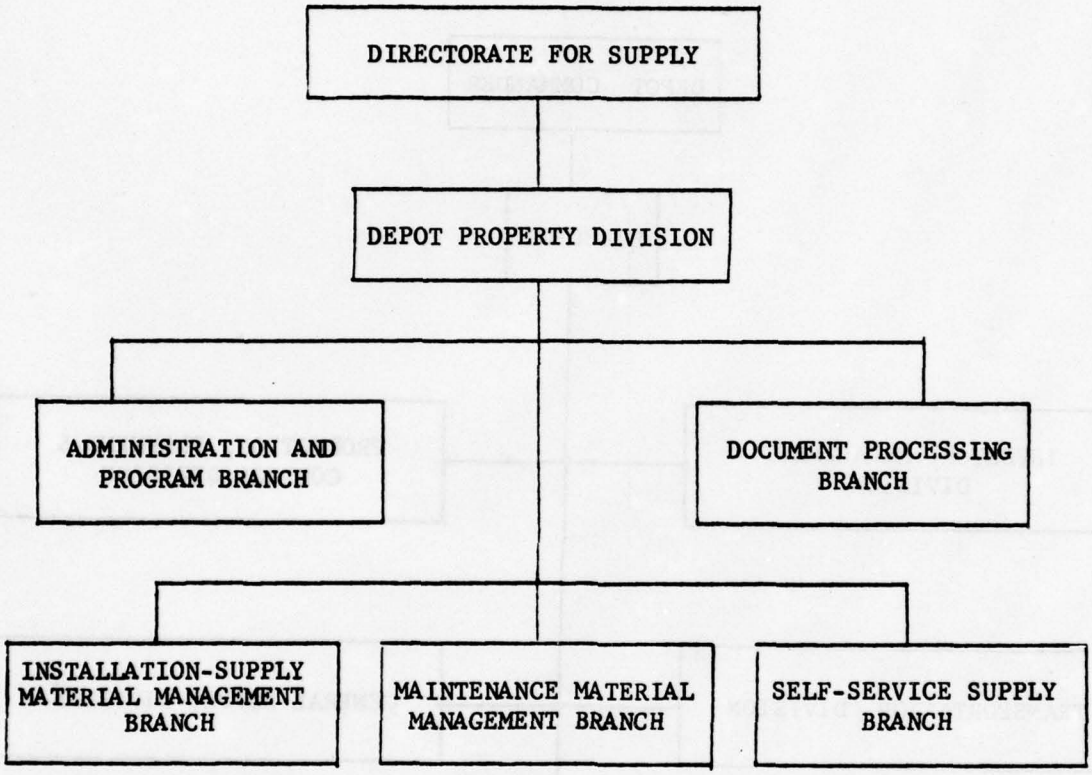



Figure IV-5

PROCUREMENT ORGANIZATION
NEW CUMBERLAND ARMY DEPOT

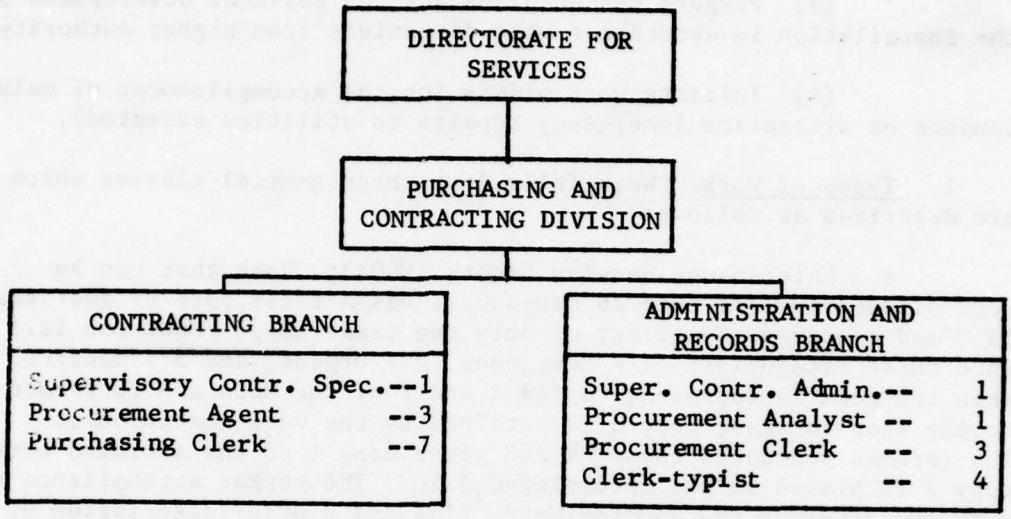



Figure IV-6

and are the only agents of the Commanding Officer authorized to enter into contractual agreements resulting in expenditure of appropriated funds.)

B. FACILITIES ENGINEER (FE) DATA

1. Mission and Functions

a. Mission

(1) Maintenance, care, and preservation of all buildings, structures, and real estate of the installation.

(2) Fire prevention and protection.

(3) For the installation of production equipment.

(4) Utilities and other miscellaneous services.

b. Functions

(1) Refine technical procedures pertaining to Facilities Engineer operations.

(2) Direct and coordinate depot improvements with responsible agencies in major construction.

(3) Prepare master plans for the physical development of the installation in accordance with directives from higher authority.

(4) Initiate work orders for the accomplishment of maintenance or alteration (emergency repairs to utilities excepted).

2. Types of Work. Work falls into three general classes which are described as follows:

a. Maintenance Service Orders (MSOs): Work that can be accomplished in less than 16 man-hours, has a total cost of less than $350 and requires the effort of only one trade shop. MSOs can fall into three categories: 1 - Emergency, 2 - Urgent, and 3 - Routine. When the work is approved, copies 1 and 2 of the MSOs are forwarded to the shop foreman, copy 3 is retained by the work receptionist. The foreman schedules the work and gives copy 1 to the assigned worker, copy 2 is placed in the uncompleted file. The worker accomplishes the work and notes on the MSO the date, time and a brief description of the work performed. The MSO is also annotated to show the value of supplies used. The MSO is returned to the foreman who removes copy 2 from the uncompleted file, enters shop stock data from copy 1, initials copy 1 and returns the MSO to the Work Coordinating Office. Copy 2 is used for supply replenishment information; copy 3 is filed in the MSO numerical sequence file and copy 1 is filed by work order number by month during which the work was completed.

b. Standing Operations Orders (SOOs): Work that is predictable in advance, and includes operations, services, and routine maintenance, e.g., operation of the water and sewage system or heating plants. SOOs are frequently written on an annual or seasonal basis. Description of the work, tasks, and related information is annotated on DA Form 2700 (Work Order (Facilities Engineering)).

c. Individual Job Orders (IJOs): Work that applies to individual jobs of varying size. IJOs can apply to maintenance and repair and/or minor construction and alterations. DA Form 2701 (Job Order Request - Facilities Engineering) is used to request work beyond the scope of an MSO. Flow of an IJO follows:

(1) Requestor of the work initiates DA Form 2701.

(2) IJO arrives in FE work receipt in four copies.

(3) IJO is given a serial number and is timed and dated by the work order clerk.

(4) IJO is acted upon. Copy returned to customer, decision made as to whether maintenance or minor construction. Goes to suspense file or routed for continuing action.

(5) IJO goes to planners and estimators for validation, scope, and estimation of work involved.

(6) IJO is reviewed by shop(s) to determine tasks and man-hours required.

(7) Materiels required for the job are listed on DA Form 2702 (Bill of Materials).

(8) Approved or disapproved IJO goes back to work reception desk.

(9) When IJO is approved DA Form 2700 is prepared and copy forwarded to the respective shops and filed with DA Form 2701.

(10) IJOs without materiel requirements go to scheduling, IJOs with materiel requirements go to materiel coordinator.

(11) Materiel coordinator checks items and determines if items are to be acquired from stock or procurement. Stock items are withdrawn from the warehouse and placed in the holding area. Supply is notified of items that must be procured. Supply items are one of three possibilities: stocked and in stock; stocked but out of stock; or a procurement item.

(12) Except for special circumstances an IJO goes to scheduler when all supply items are on hand.

(13) Scheduler determines work priority of the IJO, searches for man-hours and schedules appropriately.

(14) IJOs up to $2,500 in cost can be approved by the FE, approvals up to $50,000 can be made by the installation commander.

3. Work Generation

MSO work can be called into the work coordinating office or generated internally for small maintenance jobs.

SOO work is usually generated internally by the respective activity foreman. Examples of work covered by SOOs is operation of a heating plant, water plant, and sewage treatment plant.

IJO work can be initiated by any customer on the installation or generated internally by preparation of a DA Form 2701 (Job Order Request). Work beyond the scope of an MSO is considered an IJO. Man-hours consumed for IJOs are less than those for MSOs and SOOs. General statistics for IJOs is as follows:

(1) Fiscal Year 1975--459 IJOs completed for a cost of $247,600 (labor $176,000 and materiel $71,600).

(2) Backlog as of 30 June 1975

Awaiting scheduling, 19 IJOs

| | |
|---|---|
| Labor | $10,647 (1,521 man-hours) |
| Materiel | 6,662 |

Awaiting Materiel, 7 IJOs

| | |
|---|---|
| Labor | $ 2,808 (401 man-hours) |
| Materiel | 2,342 |

(3) Fiscal Year (1 July to 30 September)

Awaiting scheduling, 23 IJOs

| | |
|---|---|
| Labor | $14,558 (2,080 man-hours) |
| Materiel | 8,267 |

Awaiting Materiel, 16 IJOs

| | |
|---|---|
| Labor | $ 3,780 (540 man-hours) |
| Materiel | 3,104 |

(4) Backlog of IJOs as of 10 October 1975

| | |
|---|---|
| Labor | $40,152 (5,736 man-hours) |
| Materiel | 26,768 |

(5) Materiel, on an average for IJOs have a value of $156.

(6) Typical file of an IJO will contain the following forms:

DA Form 2700 (Work Order)
DA Form 2701 (Job Order Request)
DA Form 2702 (Bill of Materials)
AMC Form 1381-1 (Storage Data Request)
DA Form 2764 (Planning Work Sheet)

(7) Many IJOs are accomplished by contract, currently 19 jobs having a value of $1,603,171 have been financed, while 152 jobs having a value of $2,526,302 are unfinanced.

4. Scheduling. Scheduling of work (MSOs, SOOs, and IJOs) is dependent upon man-hours available.

a. Man-hours for planning purposes are distributed as follows:

| | | |
|---|---|---|
| SOOs | - | X man-hours |
| MSOs | - | Y man-hours |
| IJOs | - | W man-hours |
| Total Requirement | - | Z man-hours |

Z - (X + Y + W) = Contractural Requirement

IJOs of other than small size are accomplished by contract.

b. Man-hours in Fiscal Year 1975 were consumed as follows:

| | | |
|---|---|---|
| SOOs | - | 46% |
| MSOs | - | 33% |
| IJOs | - | 21% |

C. No statistics were available regarding rescheduling of work and/or man-hours cost due to materiel shortages.

5. Supply Support

The Facilities Engineer does not have any personnel dedicated to full time supply support.

a. Sources of supply

(1) Shop Stock. The shop stock is an inventory of fast moving expendable items prepositioned in the FE shops. Items are requisitioned from installation supply by use of DA Form 2765 (Request

for Issue or Turn-in). FE owned shop stocks on hand have an estimated value of $100,000.

(2) Self-Service Store. The self-service store operated by the Depot Property Division of the Directorate for Supply. The FE uses a charge-a-plate to obtain items from this source.

(3) Installation Supply. Items not available from other sources (shop stock, residual area, etc.) are ordered from installation supply. Items in this category are paint, screening, and lumber. Emergency walk-throughs that are to be purchased must be approved by installation supply. The FE orders $30,000 of supplies per month (excluding sand and gravel).

(4) Standby (Mission Essential) Items. The installation maintains 118 items on a standby basis to insure continuous operation of the post in the event of an emergency. The value of standby items is $23,662.

(5) Residual Area. The residual area contains items that are left over from completed or cancelled jobs. Items are of a wide variety and some can possibly be consumed on a future job. Items are held for a period of time, and turned in to installation supply if no foreseeable need is evident. The value of these items is small and at the time of the visit it was estimated to be approximately $1,000.

(6) Holding Area. Supplies in the holding area are accumulated for IJOs from the various supply sources and stored pending the scheduling and accomplishment of the work. Items obtained from installation supply are transferred to the FE. Items are released to the mechanic or tradesmen when the work is to be accomplished.

b. Stock Levels. Shop stock levels were reported to be a 15-day requirement as determined by the respective shop foreman. Examination of one shop (plumbing) indicated that supplies exceeded a 15-day level. Standby levels are determined by FE personnel and furnished to installation supply.

c. Funding. A portion of the installation stock fund at the beginning of the fiscal year is set aside for the FE. The fund, however, is not a true stock fund since the amount is reduced as supplies and materials are required. Personnel interviewed indicated that materiel problems do not result from funding shortages. Actual cost of supplies to the FE for Fiscal Year 1975 was $487,752.

6. Bills of Materials (BOMs). IJOs and, in some instances SOOs, will require Bill of Materials (BOM). Items that make up a BOM are generally accumulated in the holding area and held until required to perform the work.

C. CENTRAL INSTALLATION SUPPLY

1. Sources of Supply. Depot sources for FE supply support include the following areas:

a. Shop Stock. A 15-day stock level of expendable type supplies required for routine maintenance operation. Items are either obtained from the installation Self-Service Store or requisitioned through Depot Property Division if not stocked by the Self-Service Supply Center (SSSC). Shop stocks are considered as FE owned materiel and are prepositioned in the various shops for internal use by shop maintenance personnel. Shop stock consists of consumable items such as wire, tubing, nails, plumbing supplies, sandpaper, welding rod and common hardware used by repairmen. (Approximately 4,750 line items were being carried as shop stock at time of the visit.)

b. Self-Service Supply Center (SSSC)

New Cumberland Army Depot operates a central Self-Service Supply Center for support of all on base activities. The SSSC provides the primary means of supply support for the FE. Items designated as FE self-service items are stored in a separate section of the SSSC and are processed and stored as shelf stock. Sales of FE self-service items are based on approved work orders or service orders and are drawn from stock by a designated work coordinator to insure that materiel is for FE projects.

The SSSC stocks low dollar value items which require repetitive use by supported activities. Items stocked include office supplies, housekeeping supplies, common hardware, repair and utilities self-help items. Initial stockage is determined by customer request - which includes items recommended for stockage by the FE. Since New Cumberland is classified as one of the two Direct Support System Depots, no additional back-up warehouse stocks are maintained by installation supply. Stockage levels are computed based on a 30-day operating level, actual Order and Ship Time (OST) (as computed by Systemwide Project For Electronic Equipment at Depots, Extended (SPEEDEX))

SSSC stocks are considered as Army Stock Fund Materiel until issued/sold. Customer appropriations (O&M/AIF) will be billed

for issue/sales from the SSSC and Army Stock Fund account will be reimbursed as required by Army Development And Readiness Command (DARCOM) financial regulations. (The Stock Fund is not a revolving fund at installation level. Cost flow reimbursement passes to Headquarters DARCOM who either holds or redistributes new allotments through new obligations authority (OA) as needed.) Supply and Purchasing personnel stated that, to date, they were not aware of any restrictions for use of stock fund item money for FE materiel. However, it was emphasized that customer demands determine the OAs (funds), and that the customer can either obtain more dollars or DARCOM may take them away as the demand (projected/actual) requires.

c. Standby Items. These items are required to be on hand, in minimum quantities, to protect the health and welfare of troops and to safeguard Government property in any emergency. The Depot Property Division stores the items and issues the materiel upon request. As items are used, immediate action is taken to replenish the stock. Approximately 118 items were authorized for FE standby materiel at the time of the visit.

d. Central Installation Supply. For materiel not available from shop stock or SSSC, the Facilities Engineer Work Coordinator submits a requirement for non-stocked (fringe) items to the central installation Supply Officer. The requirement is processed into the supply system to initiate a requisition to the appropriate Inventory Control Point (ICP), or to Installation Procurement for purchase of Local Purchase (LP) materiel. Regardless of the source, all requests for FE materiel are processed to the Depot Property Division for action. Figure IV-7 protrays the normal flow of FE request for work requirements.

2. Stock Replenishment. As previously stated, stocked items and non-stocked (fringe) items are requisitioned through the Depot Property Division. Non-stocked items are requisitioned on an individual basis to satisfy work order requirements and routine or emergency walk through. Stocked items (other items carried in the SSSC) are replenished from SSSC back-up stocks when the stock remaining on hand reaches the shelf reorder point by processing a prepunched/preprinted replenishment record (DA Form 3219) and a Request for Issue (DA Form 2765). The SPEEDEX computer program will then automatically requisition SSC back-up stock requirements from the appropriate supply source when the SSSC reorder point is reached. It was stated that SSSC store personnel review shelf stocks daily, and replenish from back-up stocks to insure that adequate shelf stock is avilable to support mission requirements. Figures IV-8 and IV-9 portray the usual procedures that are

PROCESSING OF ENGINEERING REQUIREMENTS THRU FACILITIES ENGINEERING DIVISION

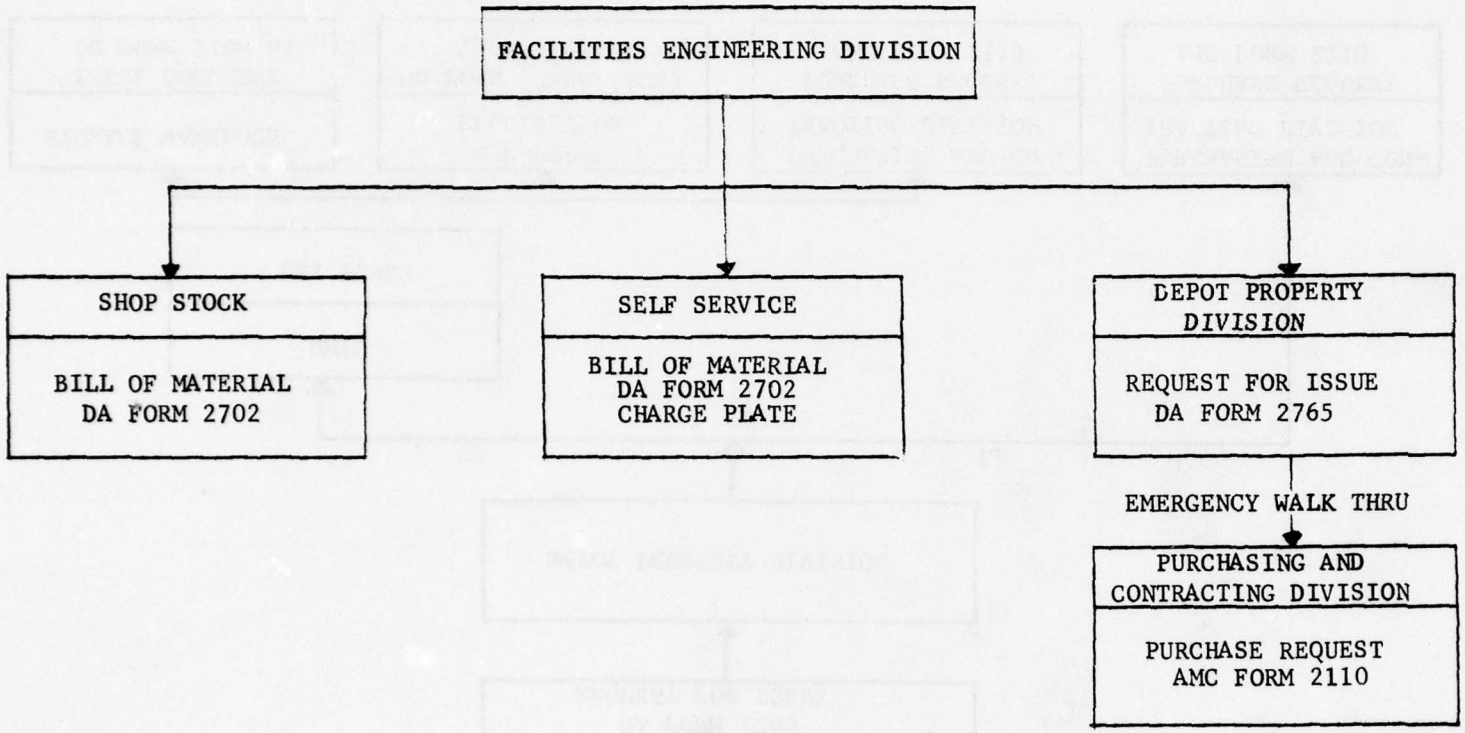



Figure IV-7

PROCESSING OF ENGINEER REQUIREMENTS THRU DEPOT PROPERTY DIVISION

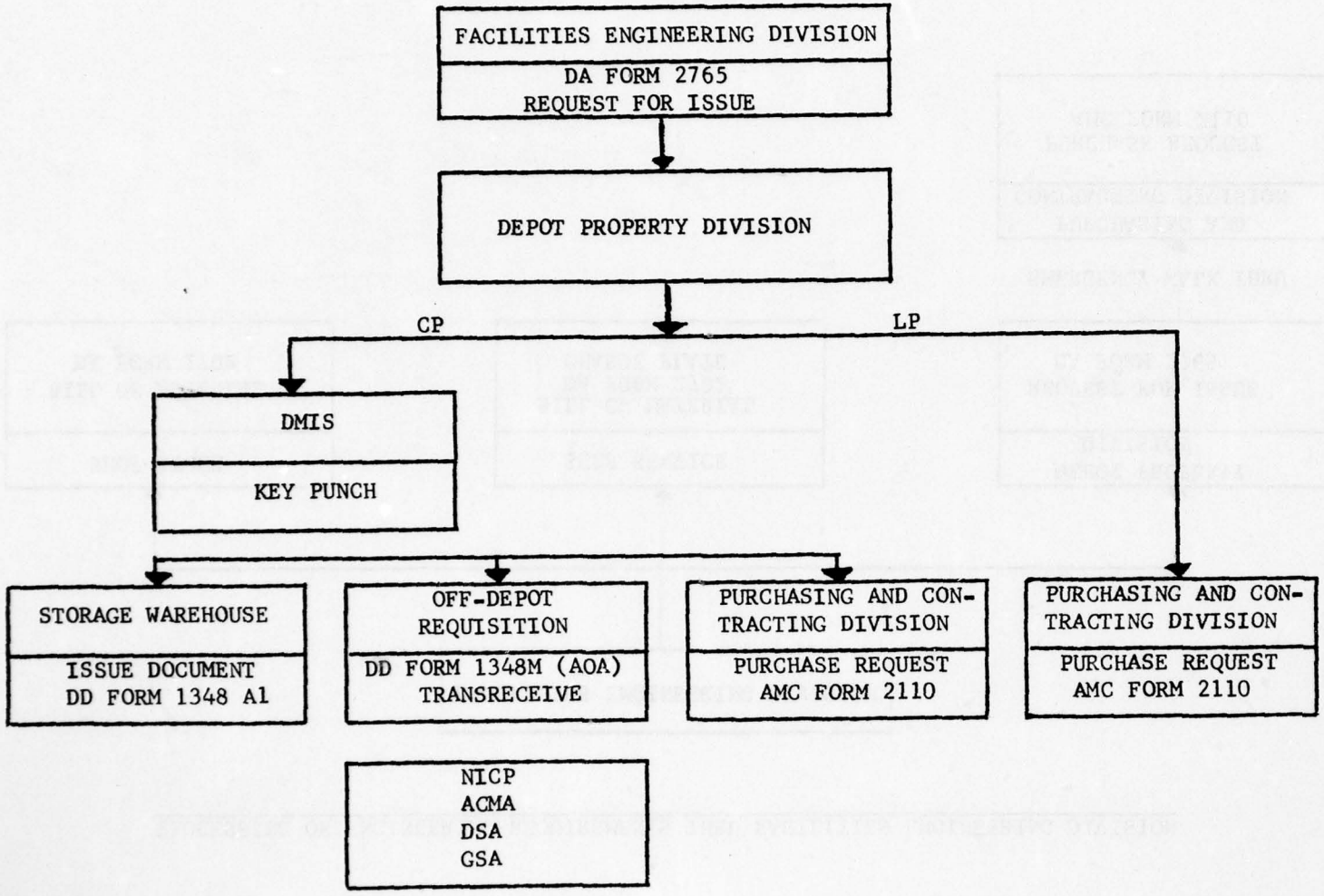



Figure IV-8

PROCESSING OF ENGINEER REQUIREMENTS THRU PURCHASING & CONTRACTING DIVISION

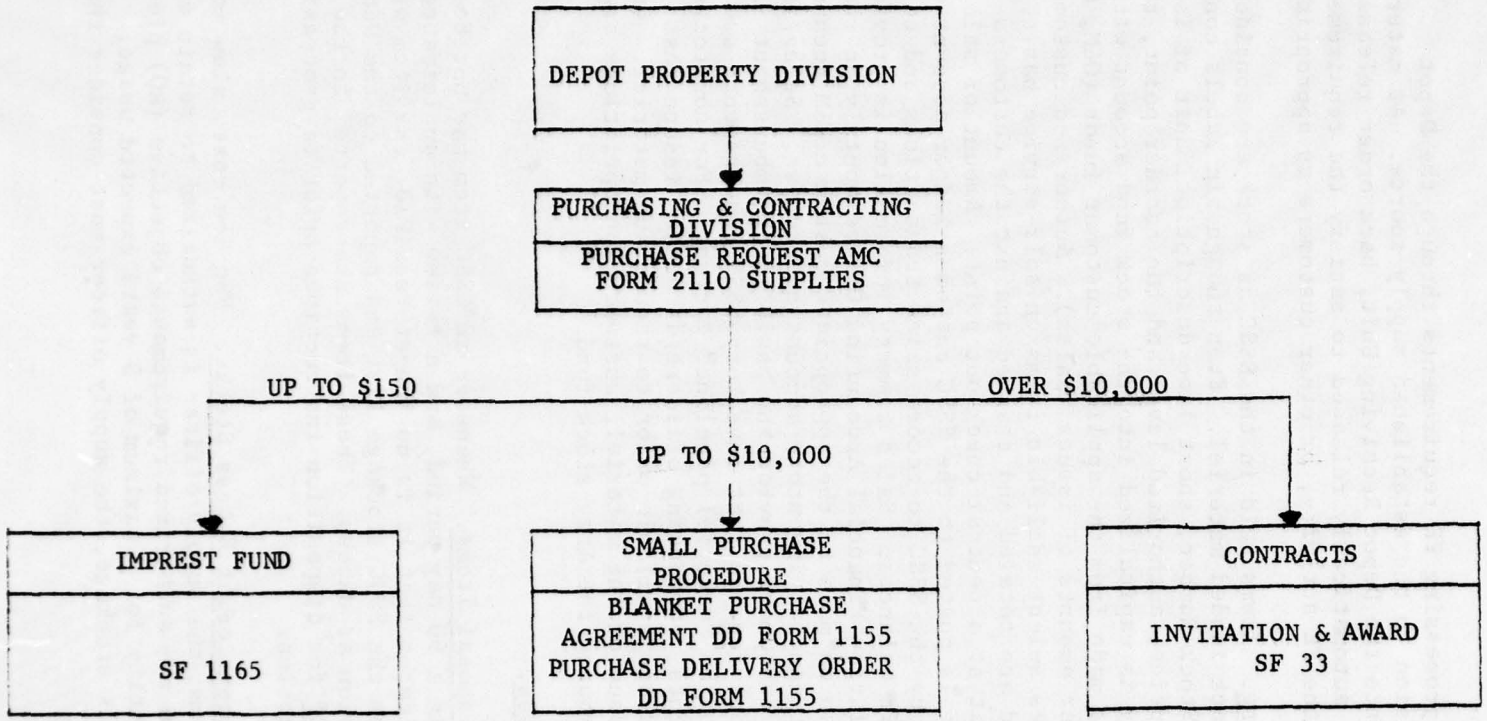



Figure IV-9

employed for processing FE requirements through the Depot Property Division to the established supply source. As materiel is received into the Depot Receiving Unit, back order release documents are automatically released to satisfy the requirement(s) of the SSSC, the FE activity, or other customers as appropriate.

3. Funding. Items held in the SSSC as stock are considered to be Army stock funded materiel. Even though bin labels contain the National Stock Number, short line description, unit of issue, unit selling price, authorized level and the reorder point, the SSSC inventory is capitalized into the stock fund account with reimbursements made from the applicable customer funds (O&M, AIF) based on dollar amounts of issues (sales). Authorized customer representatives select shelf-bin items on self-service basis. Items selected are totaled and charged against the customers monetary credit at a central check out point. Amount of sale from the sales tape is posted to the SSSC customer ledger account which is maintained by the SSSC to record sales transactions and customer monetary credit balances. Sales summary information is provided to the Installation Financial Accounting Office monthly so that adjustments can be made to the appropriate customer O&M accounts and the SSSC financial inventory accounting process. Sales/issues to authorized customers provide the basis for reimbursement from the DARCOM stock fund so that inventory SSSC requirements are funded to keep the "materiel pipeline" current. For nonstocked item requirements, commanding officers/directors insure that customer funds are available prior to requesting materiel. Upon receipt and issue of the materiel, customer appropriations are billed to reimburse the Army stock fund.

4. Excesses.

a. Disposal Items. Whenever an SSSC item has not been demanded within a 90 day period, and a review with anticipated customers indicates that it is no longer required, the item will be deleted from the SSSC stockage list and reported to the Depot Property Division as excess. These items are reported to the responsible ICP for disposition instructions prior to processing for disposal action.

b. Retention of Excess Stocks. For low cost, slow moving expendable items, the supply officer is authorized to retain excess stocks equal to the authorized requirements objective (RO) plus an additional quantity for a maximum of 3 years expected usage. In considering this stockage, the supply officer must consider the following:

-- Storage capability
-- Level of funding provided for storage, repackaging, care, and preservation.
-- Shelf life and deterioration.

Figure IV-10 portrays the usual procedures that are established for processing excess materiel from DARCOM activities.

D. CENTRAL PROCUREMENT

1. Volume. During Fiscal Year 1975, the Purchasing and Contracting Division (P&C) effected 18,437 procurement actions valued at approximately $17.7 million. Table IV-2 illustrates the number of actions; number of line items and value, by type of action.

2. FE Materiel Support. Purchasing and Contracting Division personnel estimated that approximately $1.5 million of the $17.7 million was for FE materiel support; however, $1.1 million of this was for #2 and #6 fuel oil ordered under Defense Fuel Supply Center (DFSC) Indefinite Delivery Type Contracts (IDTCs). The $400 thousand for FE procurement support other than fuel oil, was ascertained to be effected as shown in Table IV-3.

3. Processes. Procurement Requests (PRs) for FE materiel support flow as shown in Figure IV-8; that is, flow is from the Facilities Engineer Division to the Depot Property Division to the Purchasing and Contracting Division. (PRs for services and construction flow directly from the FE Division to the P&C Division.)

TABLE IV-2

TOTAL P&C TRANSACTIONS AND VALUE
(FISCAL YEAR 1975)

| Type of Action | No. of Actions | No. of L/Is | Value |
|---|---|---|---|
| BPAs | 8,550 | 8,550 | $ 343,544 |
| POs | 7,419 | 72,261 | 10,032,784 |
| DOs | 1,056 | 1,104 | 2,568,266 |
| Imprest Fund | 1,293 | 1,293 | 61,037 |
| Contracts | 119 | 180 | 4,693,869 |
| Total | 18,437 | 83,388 | $17,699,500 |

Source: NCAD Purchasing and Contracting Division

DARCOM EXCESS PROCEDURES

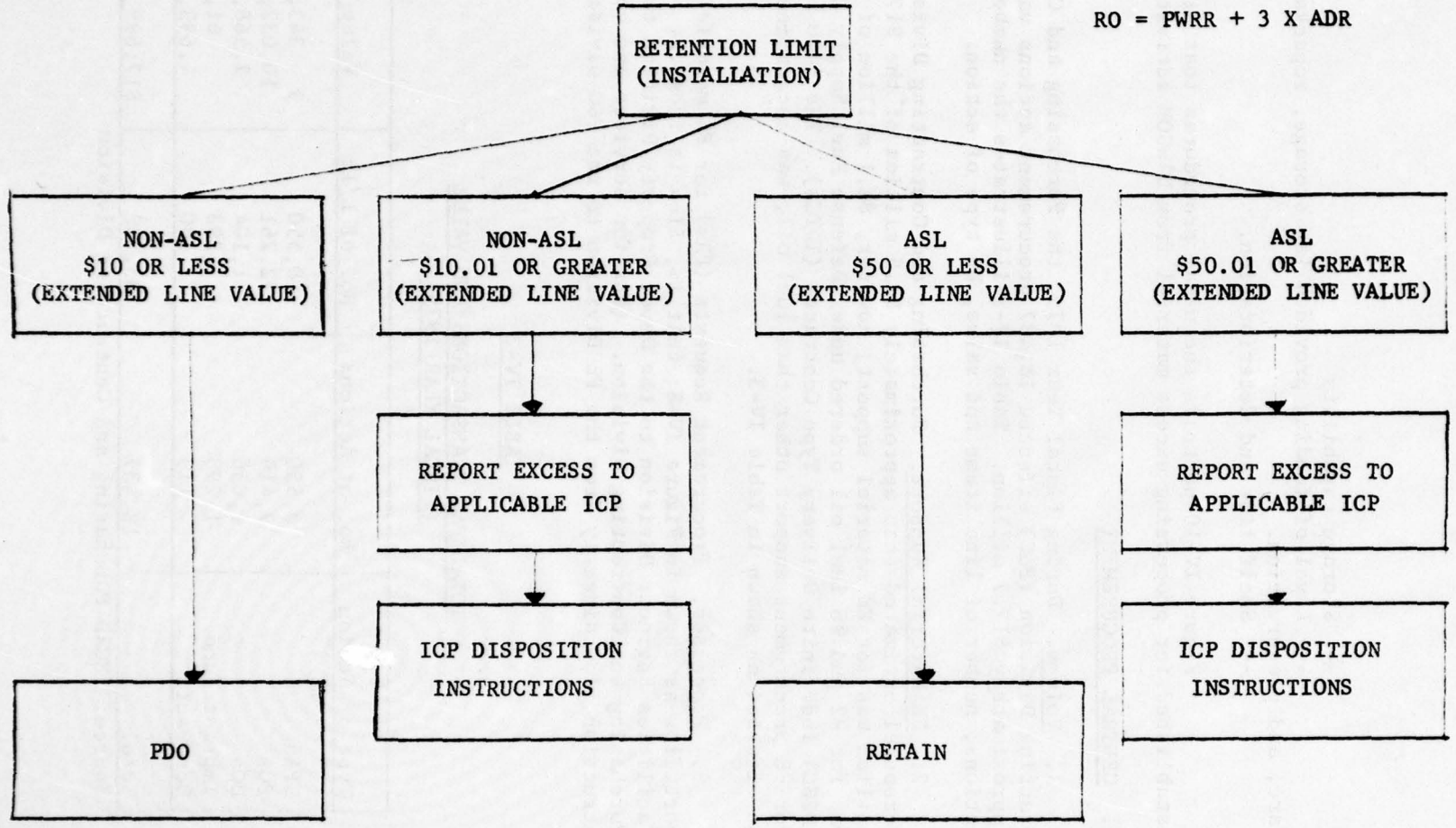



Figure IV-10

TABLE IV-3

FE PROCUREMENT SUPPORT
(FISCAL YEAR 1975)

| Type of Action | No. of Actions | No. of L/Is | Value |
|---|---|---|---|
| BPAs | 2,024 | 2,024 | $ 95,886 |
| POs | 1,302 | 3,254 | 214,764 |
| DOs | 211 | 276 | 31,650 |
| Imprest Fund | 336 | 336 | 15,132 |
| Contracts | 7 | 10 | 43,336 |
| Total | 3,880 | 5,900 | $400,768 |

Source: NCAD Purchasing and Contracting Division

4. Type of Buys/Orders. Within the Purchasing and Contracting Division materiel procurement may be effected using (1) imprest funds (SF1165), (2) Blanket Purchase Agreements (BPAs), (3) Purchase Orders (POs)/Delivery Orders (DOs) (DD-1155), or (4) contracts (SF 33). The volume of FE materiel support using each technique is displayed in Table IV-3. A review of this data indicates that 94% of the line items and 85% of the dollar value is affected using BPA orders and/or POs/DOs.

a. Blanket Purchase Agreements. NCAD P&C Division personnel indicated that BPAs were considered whenever a single vendor received three or four small purchases a month. As of September 1975 there were 50 active BPAs; of these 30 were used, primarily, in support of the FE; 11 others were used, in part, for FE support. With the exception of McMaster-Carr Supply Company (Chicago) and Sexauer (White Plains) the BPAs supporting the FE were within the local trade area; mostly the Harrisburg area and a few in the York area. Document commodities provided via BPAs were:

| | |
|---|---|
| Construction/Building Suppliers | - 5 |
| Paint and related products | - 5 |
| Electric/Electronics | - 4 |
| Plumbing and Heating Supplies | - 3 |
| Hardware and equipment parts | - 3 |
| Lumber products | - 3 |
| Aluminum, steel, and welding | - 3 |
| Bulk asphalt, gravel, cement | - 3 |

A review of 100 BPA calls confirmed that all calls are initiated by telephone and each "call" is for a single line item. However, many calls were for a series of items, to a single source, on the same day and each of these required the same set of notations on a series of PR forms. Delivery times (order to delivery) for the 100 actions were as follows:

| No. of Days | No. of Items | Percent | Cumulative Percent |
|---|---|---|---|
| 1 | 9 | 9 | 9 |
| 2 | 11 | 11 | 20 |
| 3 | 8 | 8 | 28 |
| 4 | 8 | 8 | 36 |
| 5-10 | 42 | 42 | 78 |
| over 10 | 22 | 22 | 100 |
| Total* | 100 | 100 | |

*All orders illustrated were from suppliers within 30 miles of NCAD. A review of 20 orders from McMaster-Carr Supply Company based in Chicago showed that 16 items were delivered in the 5-10 day period and four items in the beyond 10-day period category.

b. Purchase Orders/Delivery Orders (POs/DOs). A review of 40 POs/DOs reflected the following:

(1) Location of Vendors. Of 40 orders, 18 (45%) were in the local trade area; 17 (42.5%) were outside of a 100 mile radius of NCAD, including sources in California, Illinois, Ohio, and New York; and 5 (12.5%) were in an intermediate range, 50 to 100 miles, from NCAD.

(2) Reasons for Buys. Over 90% of the orders were for programmed requirements.

(3) Quantity Ordered. Quantities ordered range from a single unit to over 1,000 (e.g., one drier filter; 50 fuses; 1,100 gallons of solvent).

(4) Unit Prices. Prices ranged from less than $1 to over $1,000 (e.g., a 48¢ filter; a $14 seal; a $1,212 compressor).

(5) Value of Orders. Orders ranged in value from $11.40 to over $4,000; however only seven orders (17.5%) were over $500 and only one order exceeded $2,500.

(6) Number of Items per Order. The number of line items per order were as follows:

| No. of L/Is | No. of Orders | Percent | Cumulative Percent |
|---|---|---|---|
| 1 | 33 | 82.5 | 82.5 |
| 2 | 5 | 12.5 | 95.0 |
| 3 | 1 | 2.5 | 97.5 |
| 7 | 1 | 2.5 | 100.0 |
| Total | 40 | 100.0 | |

(7) Delivery Times. Delivery Times (order date to delivery date) ranged from 7 to 80 days. Delivery times were distributed as follows:

| No. of Days | No. of Orders | Percent | Cumulative Percent |
|---|---|---|---|
| 1-10 | 3 | 7.5 | 7.5 |
| 11-20 | 9 | 22.5 | 30.0 |
| 21-30 | 10 | 25.0 | 55.0 |
| 31-40 | 6 | 15.0 | 70.0 |
| 41-50 | 2 | 5.0 | 75.0 |
| 51-60 | 7 | 17.5 | 92.5 |
| 61-90 | 3 | 7.5 | 100.0 |
| Total | 40 | 100.0 | |

(8) Type of Items Ordered. A wide range of items were ordered as illustrated:

Electrical - ceiling lights, electric griddle, fluorescent lights, terminals, fuses

Hardware - pliers, saw, chain, paint

Plumbing - safety valve, rubber valve, gaskets

Repair Parts - hydrant replacement assembly, points

Wood Products - ozalid paper, white pine

Only five (12.5%) of the orders were Delivery Orders; one from Federal Prison Industries (FPI) and four from GSA contracts. The DO items were safety shoes (FPI), and a pallet puller, lamps, solvent, and a calculator (GSA).

## E. INDIVIDUAL ITEM RESEARCH

1. Review of 9 work orders (14 items) revealed the following:

a. Items were all requisitioned by installation supply for delivery to the FE. All items were overdue:

1 - 30 days - 2
30 - 60 days - 4
60 - 90 days - 8

b. Items were for small quantities:

1 each - 10 items
3 each - 1 item
10 each - 1 item
25 each - 1 item
60 each - 1 item

c Most expensive item was $27.50, least expensive item was $0.45.

2. Information in regards to delayed IJOs and status of supply items causing the delay follows:

a. IJO 5C5081 delayed by item 6145-00-173-6646, Wire, electric, one coil. Item requested by FE from installation supply 6 May 1975, and requisitioned from GSA 27 May 1975. Wire back ordered with estimated delivery date of 9 January 1976.

b. IJO 5C5164 delayed by two items: (a) 7195-00-647-2122, Partition, panel, one each; and (b) 7195-00-647-2113, Partition, panel, one each. Items requested by FE from installation supply 7 April 1975 and requisitioned from GSA New York 15 April 1975. Partitions were received on 5 November 1975 and IJO has been completed.

c. IJO 5A2457 delayed by two items: (a) 5640-00-X41-9684, Insulation, 60 length, and (b) 4730-00-595-0669, Coupling, 10 each. Insulation was requested by FE from installation supply on 12 August 1975 and ordered from local purchase on 13 August 1975. Coupling was requested by FE from installation supply on 12 August 1975 and requisitioned from GSA New York 25 August 1975. The coupling was received 17 December 1975, but the insulation had not been received as of 14 January 1976.

d. IJO 5B4642, delayed by item 6145-00-239-1304, Wire, electric, one coil. Item was requested by FE from installation supply 9 July 1975 and requisitioned from GSA New York 29 July 1975. Item to be shipped from vendor with estimated delivery date of 22 January 1976.

e. IJO 5C5452 delayed by item 59750990X79-1967, Box, floor, 25 each. Item was requested by FE from installation supply 15 July 1975 and ordered from local purchase 3 August 1975. The item had not been received as of 14 January 1976.

f. IJO 5C5203 delayed by two items: (a) 7195-00-6470-2112, Partition, panel, one each and (b) 7195-00-647-2113, Partition, panel, one each. Items were requested by FE from installation supply 3 April 1975 and requisitioned from GSA New York 15 April 1975. Partitions were received 5 November and 17 December 1975; IJO has been completed.

g. IJO 5B5238 delayed by two items: (a) 5306-00-265-0786, Bolt, machine, one box; and (b) 6145-00-173-6646, Wire, electric, one coil. Items were requested by FE from installation supply 21 May 1975. Items were requisitioned from GSA New York on 29 May and 1 June 1975. Bolts have been received, but the electric wire was back ordered with an estimated delivery date of 9 January 1976.

h. IJO 5C2355 delayed by item 7195-00-647-2112, Partition, office, one each. Item requested by FE from installation supply 14 April 1975 and requisitioned from GSA New York 21 April 1975. Partition was received on 5 November 1975 and IJO was completed.

i. IJO 5B5276 delayed by two items: (a) 6145-00-239-1391, Wire, electric, thin, blue, one coil, and (b) 6145-00-173-6646, Wire, electric, thin, red, one coil. Items requested by FE from installation supply 16 June 1975 and requisitioned from GSA New York 1 and 11 July 1975. Items back ordered with estimated delivery date 22 January 1976.

# CHAPTER V

# U.S. ARMY, EUROPE

## A. MANAGEMENT DATA

### 1. General

Previous Department of Defense (DoD) wide analyses (e.g., the "Report on Commercial Vehicle Supply Support" of 1969, the "Report on DoD Personal Property Disposal Organization" of 1971, and the "Construction Engineer Equipment Maintenance Study" of 1973), Military Department Headquarters briefings, Continental United States (CONUS) field research, and European Headquarters briefings provided a set of factors which are pertinent to the European Facilities Engineer/Civil Engineering (FE/CE) programs and FE/CE materiel support arrangements. These are:

* In contrast to the Army and Air Force, the Navy installations and military and civilian populations requiring FE/CE support in Europe are very small. Only one major base, Rota, Spain, and the support activity Naples, Italy, have significant military and civilian populations requiring Public Works type support. The primary source of supply for these activities is Norfolk, Virginia; only minimal local materiel purchases are made by the Navy in Europe for support of the civil engineer.

* The vast majority of U.S. Army and Air Force major installations and their associated military and civilian populations are located in Germany (primarily the southern and western regions of West Germany).

* Even though many relatively small installations and activities as far away as Greece, Turkey, North Africa, and Great Britain are organizationally associated with and/or satellited upon the European support structure, the current FE organization is oriented primarily toward the support of facilities in West Germany.

### 2. Theater Organization

Facility Engineer operations and FE materiel support for the U.S. Army in Europe are significantly influenced by a set of organizational arrangements, including:



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— The U.S. Army Facility Engineer Staff structure which disseminates FE policy from U.S. Army Europe (USAREUR) Headquarters through the V Corps, VII Corps, and 1st Support Brigade Headquarters' FE staffs to the respective Directorate of Facilities Engineering (DFAE) in the European Army Communities (Figure V-1).

— The U.S. Army "community" organization within which the Directorate of Facilities Engineering performs day-to-day FE tasks;

— The U.S. Army Facilities Engineer Support Activity Europe (USAFESAE) is an organization dedicated to supporting FE operations in Europe; and

— The U.S. Army Procurement Agency, Europe (USAPAE) which provides purchasing and contracting support to FE, as well as other, operations in Europe. Each of these organizational arrangements are described in the following paragraphs.

Since the primary day-to-day operations of the FE occur at the "community" level, this is where the DFAE and the related materiel support organizations have recurring daily interface. Therefore, the Sections of this Chapter subsequent to the overall organizational descriptions describe materiel support processes and statistics based on briefings and observations obtained during visits to three communities — Kaiserslautern, Stuttgart, and Frankfurt.

### 3. FE Organization

With the establishment of the "Community Commander" concept in 1974, the Engineer Command, Europe and the "engineer chain of command" from USAREUR Headquarters to the Directors of Facilities Engineer were disestablished. Technical direction and policy guidance, however, continue to flow from USAREUR, Headquarters to the DFAE through a set of staff organizations; that is from the Facilities Engineer Division, Office of Chief of Staff, Engineer, Headquarters, USAREUR to the Directorates of Facilities Engineer, in the Headquarters of each of the three Regions (V Corps, VII Corps, and 1st Support Brigade) and, hence, on to the DFAEs of the respective "Community Commands."

The USAREUR Regional structure for V Corps, VII Corps, and the 1st Support Brigade has been organized into four geographical areas. Figure V-2 portrays the geographical limits of each area, with the 1st Support Brigade responsible for two areas, one of which, the Northern area, includes only one Community located in Bremerhaven. Each Regional Commander is responsible for the operational and support mission within their respective area(s). Community support responsibilities have been further delegated by the Regional Commander to Community Commanders.

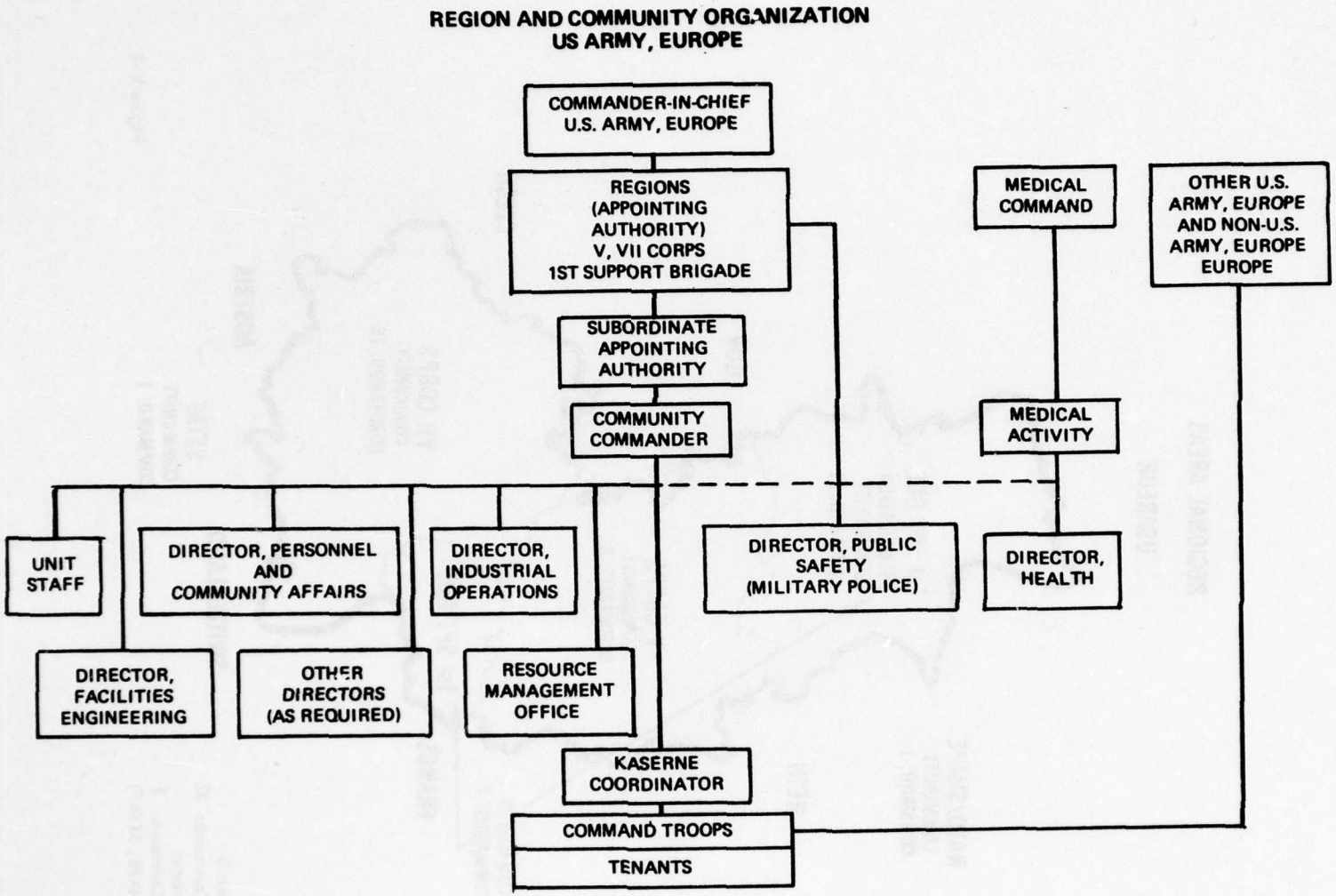
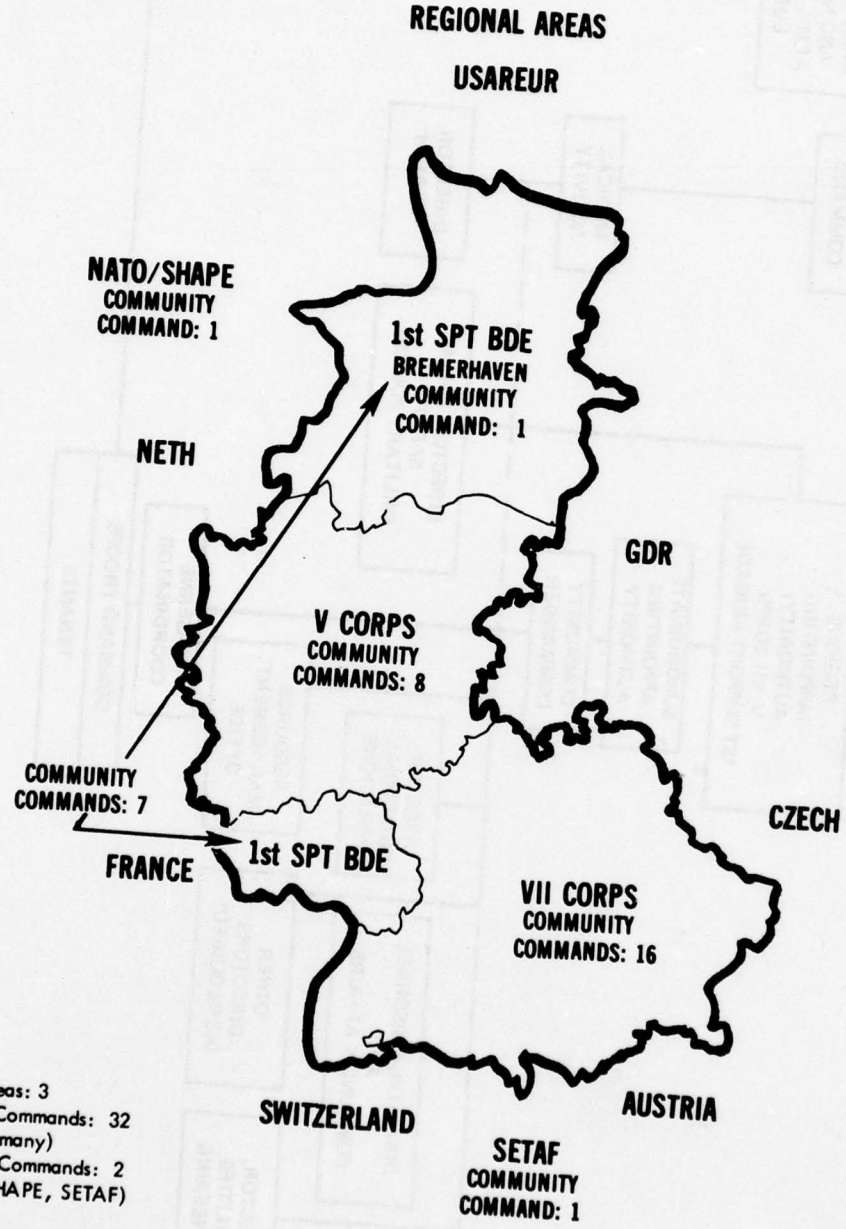

REGION AND COMMUNITY ORGANIZATION
US ARMY, EUROPE
COMMANDER-IN-CHIEF
U.S. ARMY, EUROPE
REGIONS
(APPOINTING
AUTHORITY)
V, VII CORPS
1ST SUPPORT BRIGADE
MEDICAL
COMMAND
OTHER U.S.
ARMY, EUROPE
AND NON-U.S.
ARMY, EUROPE
EUROPE
SUBORDINATE
APPOINTING
AUTHORITY
COMMUNITY
COMMANDER
MEDICAL
ACTIVITY
UNIT
STAFF
DIRECTOR, PERSONNEL
AND
COMMUNITY AFFAIRS
DIRECTOR,
INDUSTRIAL
OPERATIONS
DIRECTOR, PUBLIC
SAFETY
(MILITARY POLICE)
DIRECTOR,
HEALTH
DIRECTOR,
FACILITIES
ENGINEERING
OTHER
DIRECTORS
(AS REQUIRED)
RESOURCE
MANAGEMENT
OFFICE
KASERNE
COORDINATOR
COMMAND TROOPS
TENANTS

Figure V-1




Regional Areas: 3
Community Commands: 32
(West Germany)
Community Commands: 2
(NATO/SHAPE, SETAF)

Figure V-2

The organizational structures for the Regional and the Community Commander is shown in Figure V-1.

Thirty-two Community Commands have been established throughout West Germany; two others have been established to support NATO/SHAPE (Chievres, Belgium) and SETAF (Vincenza, Italy). The DFAEs in each of these Communities report to the local Community Commander.

Within the organizational structure of the Community Commander, the Facility Engineer staff operates as a major Directorate. The Facility Engineer, as a staff member, advises the Commander regarding engineering policy and technical guidance received from higher headquarters engineer staffs, as well as regarding local engineering support situations and problems.

The DFAE is responsible for overseeing major and minor construction within the Community and for providing services essential to the operation of the base or community area. Figure V-3, broken out by major function, shows the services which a typical DFAE is expected to provide to a Community.

DFAE FUNCTIONS
U.S. ARMY EUROPE

| Management and Engineering Operations | Operation of Utilities | Maintenance and Repair | Support Services | Minor Construction |
|---|---|---|---|---|
| Planning & Directing | Water Service | Water Systems | Fire Protection | Erection/ Installation of a new facility |
| Administrative Services | Sewage Service | Sewage Systems | Refuse Handling | Addition Expansion |
| Industrial Engineering | Electric Service | Electric " | Entomology | Extension/ Alteration |
| Program Management | Boiler & Heating Plants | Heating " | Custodial | Conversion/ Replacement of an existing facility |
| Engineering & Services | Cold Storage | Refrigeration | Snow Removal | |
| Master Planning | Air Conditioning | Air Conditioning | Coal Handling | |
| Real Property Supply & | Other Utilities | Building & Grounds | | |
| | | Railroads | | |
| | | Surfaced Areas | | |
| | | Special Equipment | | |
| | | Other Utilities | | |
| | | Miscellaneous Maintenance | | |

Figure V-3

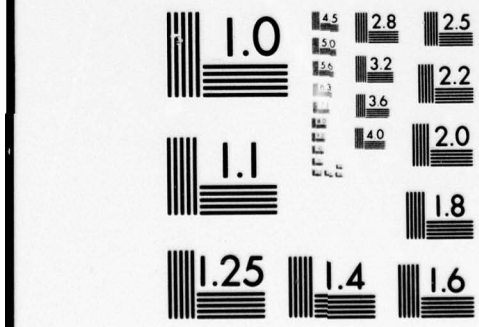
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MATERIEL SUPPORT TO CIVIL ENGINEER OPERATIONS. VOLUME II. FIELD--ETC(U)
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4. Facilities Engineer Supply Organization. The U.S. Army, Facility Engineers in Europe are supported by a dedicated materiel support organization consisting of (1) the U.S. Army Facilities Engineer Support Activity, Europe and (2) an FE Materiel Distribution System consisting of Stock Record Accounts (SRAs) used to provide FE materiel through a chain of main and subwarehouses.

a. The U.S. Army Facilities Engineer Support Activity Europe is organized as shown in Figure V-4. It operates under the direct control and supervision of the Facilities Engineer Division, Office of the Deputy Chief of Staff, Engineer, Headquarters, United States Army, Europe and receives administrative support from the Headquarters V Corps located in Frankfurt. USAFESAE has the overall responsibility to provide support (supplies, maintenance, and services) to the FEs in Europe. Among the organizations major responsibilities are the following:

— The Real Property Maintenance Activities (RPMA) Supply Division establishes USAREUR supply policy for facilities engineers and prepares USAREUR supplemental regulations and manuals to meet conditions peculiar to the handling of FE supplies and Maintenance and Services (M&S) Equipment; provides FE personnel with interpretations and guidance on technical functions pertaining to supply management; exercises USAREUR staff technical supervision over the requisition and procurement of FE supplies; exercises staff supervision over FE Real Property Maintenance Activities supply activities and property accountability for real property assets; coordinates the preparation of the annual request for determination and funding for foreign source procurement of RPMA supplies; provides assistance to automate RPMA SRAs and develops training programs designed for FE property and supply personnel at community level; establishes an effective and economical program for visibility of RPMA excess supplies in theater or directs cross leveling or disposal of excess in the United States Army, Europe; and, reviews and appraises requests for addition to or deactivation of FE property accounts. The Catalog Branch of the Supply Division publishes and maintains the RPMA (bilingual) catalogs for supplies and equipment; assigns management control numbers (MCNs) or line item numbers (LINs) to nonstandard items of supply and equipment required for FE operations; develops and performs a standardization program for RPMA supply materiel; compares products available on the local economy with products manufactured in the continental United States and recommends substitutions; provides technical assistance and advice about identifying and specifying supply items; and coordinates with the German Army inventory control point on conversion of items from MCN to National Stock Numbers (NSNs).

**U.S. ARMY FACILITIES ENGINEER SUPPORT ACTIVITITY, EUROPE (USAFESAE)**

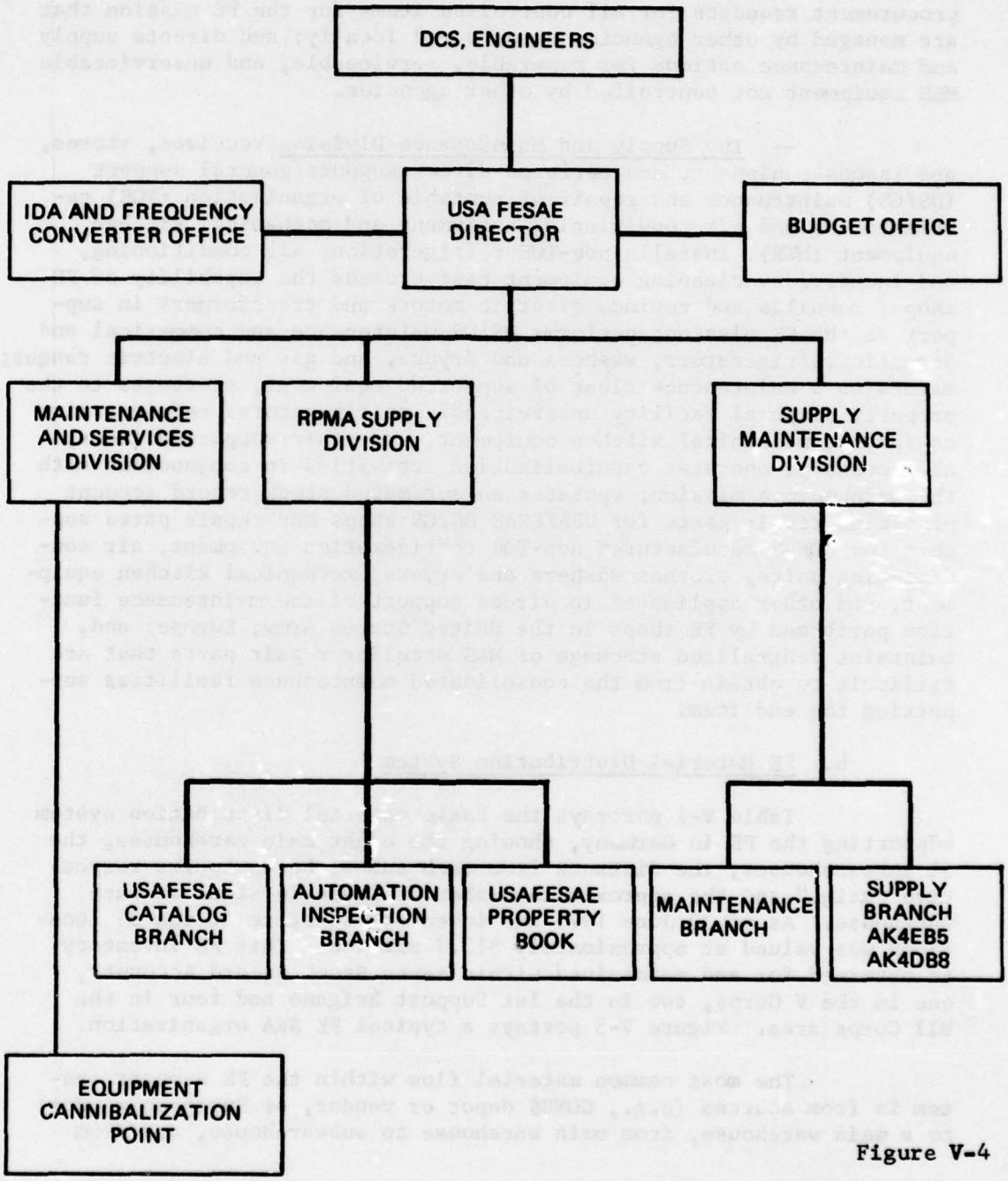



Figure V-4

— The Maintenance and Service Division exercises staff supervision over the (a) FE M&S equipment program and (b) cannibalization point and equipment pool; coordinates requisition actions and procurement requests for all controlled items for the FE mission that are managed by other agencies or procured locally; and directs supply and maintenance actions for reparable, serviceable, and unserviceable M&S equipment not controlled by other agencies.

— The Supply and Maintenance Division receives, stores, and issues equipment, and performs direct support/general support (DS/GS) maintenance and repair of nontable of organization (TOE) refrigeration and air conditioning equipment and mechanical kitchen equipment (MKE); installs non-TOE refrigeration, air conditioning, and laundry/dry cleaning equipment that exceeds the capability of FE shops; rebuilds and rewinds electric motors and transformers in support of the FE mission; performs DS/GS maintenance and commerical and domestic refrigerators, washers and dryers, and gas and electric ranges; maintains a maintenance float of supported equipment; processes to the property disposal facility unserviceable refrigerators, refrigeration equipment, mechanical kitchen equipment, and other supported items, as necessary; operates cannibalization activities in conjunction with the maintenance mission; operates an automated stock record account providing repair parts for USAFESAE DS/GS shops and repair parts support for CONUS-manufactured non-TOE refrigeration equipment, air conditioning units, clothes washers and dryers, mechanical kitchen equipment, and other appliances in direct support of the maintenance function performed by FE shops in the United States Army, Europe; and, maintains centralized stockage of M&S peculiar repair parts that are difficult to obtain from the consolidated maintenance facilities supporting the end item.

b. FE Materiel Distribution System

Table V-1 portrays the basic materiel distribution system supporting the FE in Germany, showing the eight main warehouses, the 31 subwarehouses, the distance from each subwarehouse to its respective "main," and the approximate number of items in stock at each warehouse. As of 30 June 1975 the inventory in store at the 31 locations was valued at approximately $13.7 million. This FE inventory is obtained for and maintained within seven Stock Record Accounts, one in the V Corps, two in the 1st Support Brigade and four in the VII Corps area. Figure V-5 portays a typical FE SRA organization.

The most common materiel flow within the FE support system is from sources (e.g., CONUS depot or vendor, or European vendor) to a main warehouse, from main warehouse to subwarehouse, and from

Table V-1

FE MATERIEL DISTRIBUTION SYSTEM, U.S. ARMY EUROPE

| | Main Warehouse(s) | Sub-Warehouses | Distance to Main Warehouse (miles) | Approximate No. of Line Items 1/ |
|---|---|---|---|---|
| V Corps: | GIESSEN | X X X X | X X X | 4,200 |
| | | Frankfurt | 40 | 2,200 |
| | | Darmstadt | 60 | 1,900 |
| | | Fulda | 60 | 1,450 |
| | | Hanau | 40 | 2,000 |
| | | Baumholder | 115 | 1,800 |
| | | Bad Kreuznach | 80 | 1,600 |
| | | Mainz | 60 | 1,300 |
| VII Corps: | STUTTGART | X X X X | X X X | 4,500 |
| | | Heilbronn | 32 | 1,700 |
| | | Schwaebisch Hall | 61 | 1,200 |
| | | Goeppingen | 42 | 1,300 |
| | AUGSBURG | X X X X | X X X | 4,800 |
| | | Ulm | 60 | 2,500 |
| | | Muenchen | 60 | 2,500 |
| | | Berchtesgaden | 170 | 1,800 |
| | | Garmisch | 75 | 2,200 |
| | | Bad Toelz | 100 | 2,000 |
| | NUERNBERG | X X X X | X X X | 5,000 |
| | | Ansbach | 30 | 2,000 |
| | | Aschaffenburg | 120 | 1,200 |
| | | Bamberg | 40 | 3,000 |
| | | Schweinburg | 95 | 1,400 |
| | | Bad Kissingen | 120 | 750 |
| | | Wuerzburg | 65 | 2,100 |
| | | Kitzingen | 55 | 1,500 |
| | | Wertheim | 95 | 1,400 |
| | GRAFENWOEHR | X X X X | X X X | 3,500 |
| | | Hohenfels | 60 | 1,200 |
| | | Regensburg | 75 | 650 |
| | | Wildflecken | 180 | 2,500 |
| | | Bayreuth | 30 | 1,600 |
| 1st Support Brigade: | KAISERSLAUTERN | X X X X | X X X | 1,650 |
| | | Pirmasens | 20 | 850 |
| | | Zweibruecken | 30 | 900 |
| | MANNHEIM | X X X X | X X X | 2,400 |
| | | Heidelberg | 10 | 1,800 |
| | | Karlsruhe | 40 | 2,200 |
| | BREMERHAVEN | X X X X | X X X | 2,100 |
| Totals | 8 | 31 | X X X | 80,650 2/ |

Source: US Army FESAE, Frankfurt

1/ Nationally Stock Numbered items and fringe items for which stock is maintained.

2/ Gross line items in the 39 locations.

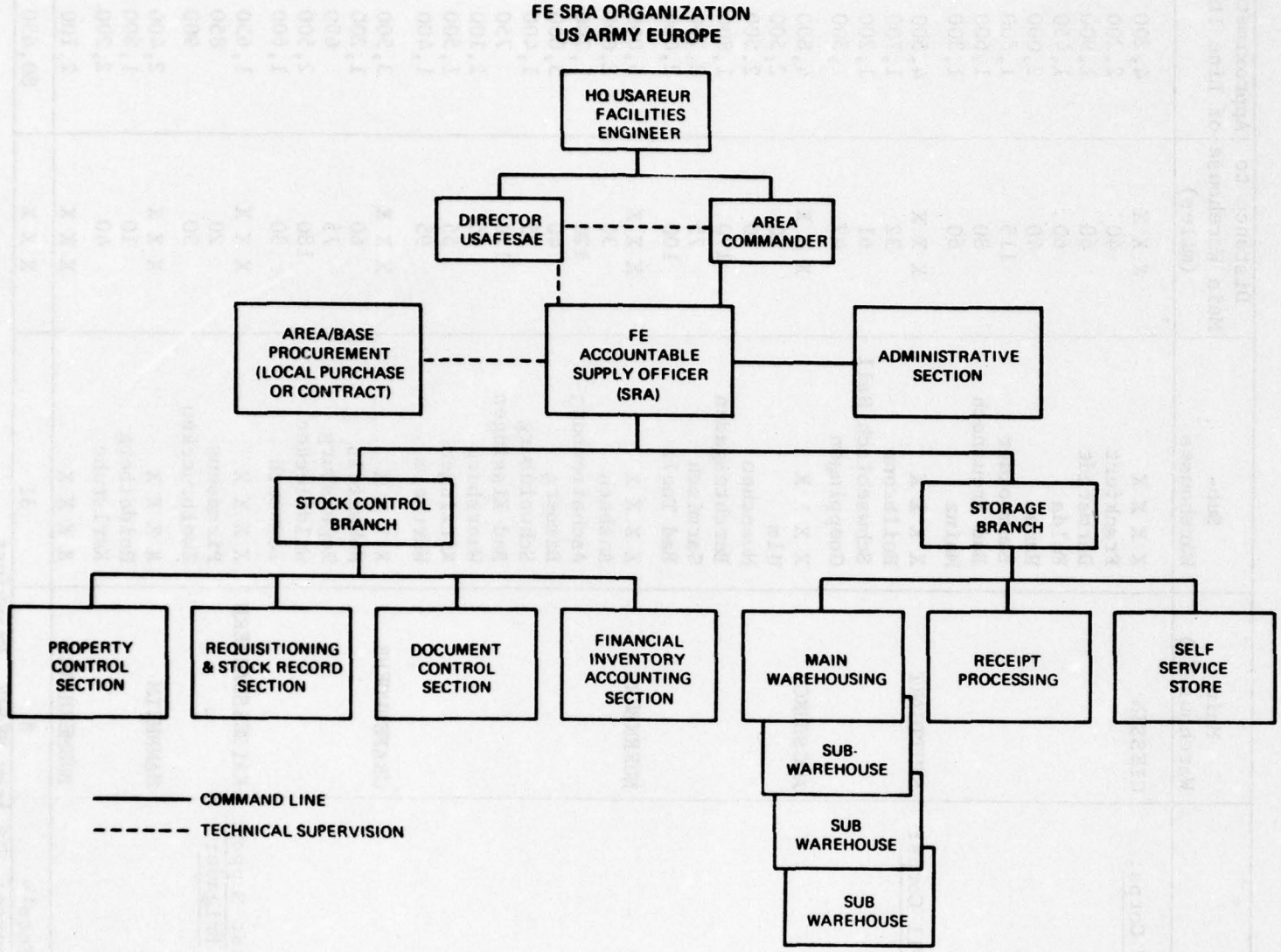

FE SRA ORGANIZATION
US ARMY EUROPE
HQ USAREUR FACILITIES ENGINEER
DIRECTOR USAFESAE
AREA COMMANDER
AREA/BASE PROCUREMENT (LOCAL PURCHASE OR CONTRACT)
FE ACCOUNTABLE SUPPLY OFFICER (SRA)
ADMINISTRATIVE SECTION
STOCK CONTROL BRANCH
STORAGE BRANCH
PROPERTY CONTROL SECTION
REQUISITIONING & STOCK RECORD SECTION
DOCUMENT CONTROL SECTION
FINANCIAL INVENTORY ACCOUNTING SECTION
MAIN WAREHOUSING
RECEIPT PROCESSING
SELF SERVICE STORE
SUB-WAREHOUSE
SUB WAREHOUSE
SUB WAREHOUSE
COMMAND LINE
TECHNICAL SUPERVISION

Figure V-5

subwarehouse to the local FE. Each main warehouse supports local customers directly and there are some inter-SRA transfers. The estimated weekly main warehouse workload associated with materiel ordering, transfers, and issues is shown in Table V-2.

Issue from main and subwarehouses may be directly to FE projects, or to FE shop stocks and maintenance trucks. Within the three major support areas there are 32 Communities supported by 427 shop stocks and 249 maintenance trucks containing an aggregate of over 100 thousand gross line items, as shown in Table V-3.

In summary form the basic overall supply support structure for the U.S. Army FE in West Germany is shown in Figure V-6.

Table V-2

USAREUR ENGINEER SUPPORT
MAIN WAREHOUSE WORKLOAD ESTIMATES
(weekly)

| Main Warehouse | Requisitions | | Receipts | Issues to 1/ Customers | Lateral Transfers 2/ | Unserviceable Returns | Local Procmt | |
|---|---|---|---|---|---|---|---|---|
| | MILSTRIP | Local | | | | | Documents | 3/ Items |
| Giessen | 73 | 468 | 372 | 2,875 | 16 | 64 | 31 | 650 |
| Stuttgart | 175 | 470 | 525 | 1,050 | 9 | 8 | 37 | 630 |
| Augsburg | 114 | 375 | 519 | 2,500 | 6 | 5 | 31 | 400 |
| Nuernberg | 81 | 336 | 650 | 2,000 | 25 | 30 | 37 | 913 |
| Grafenwoehr | 200 | 350 | 350 | 1,300 | 5 | 10 | 40 | 600 |
| Kaiserslautern | 40 | 180 | 200 | 900 | 5 | 20 | 35 | 400 |
| Mannheim | 40 | 220 | 150 | 900 | 3 | 16 | 25 | 350 |
| Bremerhaven | 30 | 340 | 80 | 650 | 1 | 1 | 37 | 340 |
| Total | 753 | 2,739 | 2,846 | 12,175 | 70 | 154 | 273 | 4,283 3/ |

Source: U.S. Army FESAE, Frankfurt

1/ Subwarehouses, maintenance shops, maintenance trucks, and FE shops.
2/ Transfers from one SRA to another.
3/ Includes FE buys using imprest funds and orders under BPAs.

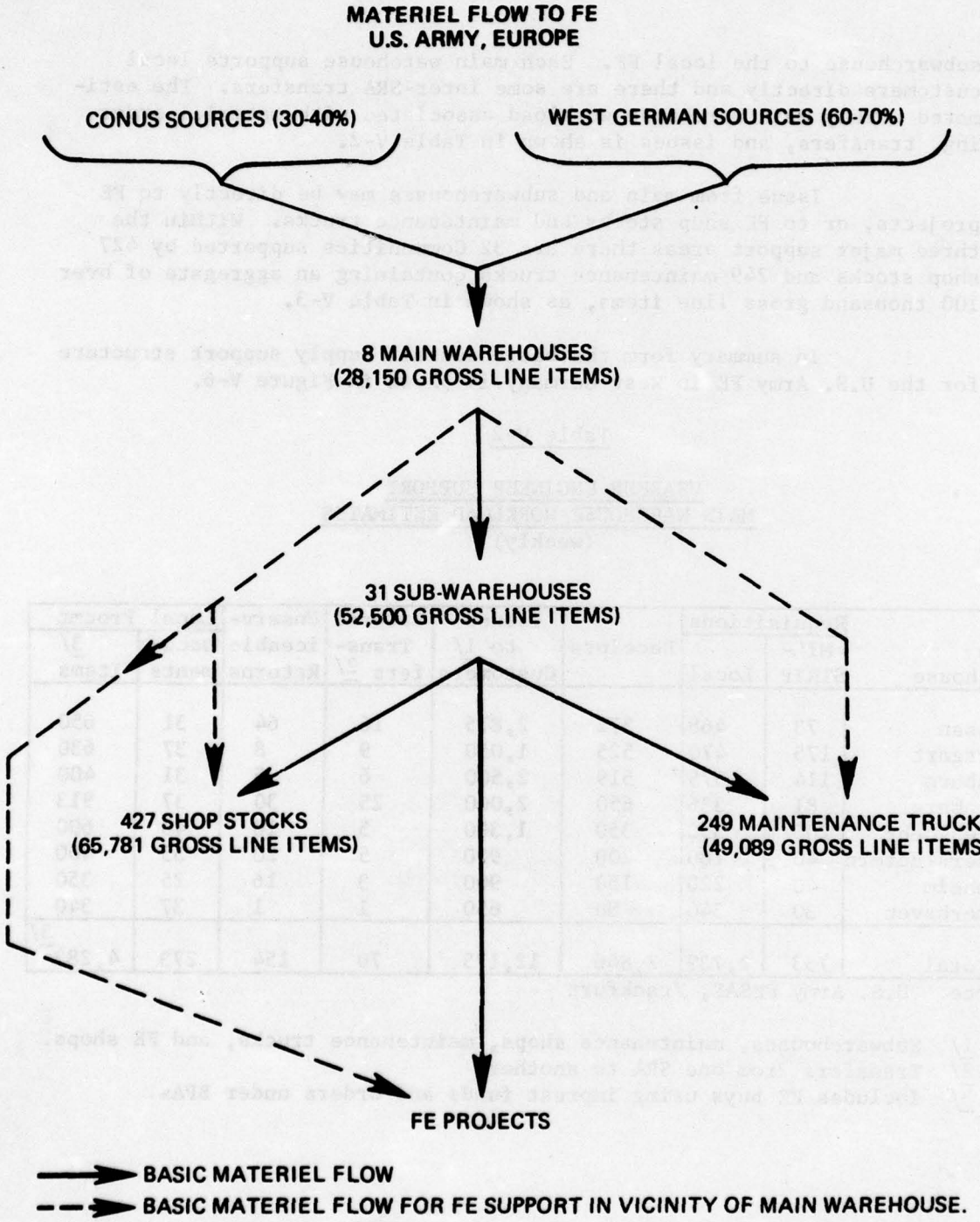

MATERIEL FLOW TO FE
U.S. ARMY, EUROPE
CONUS SOURCES (30-40%)
WEST GERMAN SOURCES (60-70%)
8 MAIN WAREHOUSES
(28,150 GROSS LINE ITEMS)
31 SUB-WAREHOUSES
(52,500 GROSS LINE ITEMS)
427 SHOP STOCKS
(65,781 GROSS LINE ITEMS)
249 MAINTENANCE TRUCKS
(49,089 GROSS LINE ITEMS)
FE PROJECTS
BASIC MATERIEL FLOW
BASIC MATERIEL FLOW FOR FE SUPPORT IN VICINITY OF MAIN WAREHOUSE.

Figure V-6

Table V-3

USAREUR ENGINEER SUPPORT
SHOP STOCKS AND MAINTENANCE TRUCKS

| Major Area | Number of Communities | Shop Stocks | | Maintenance Trucks | |
|---|---|---|---|---|---|
| | | Number of Shops | Number of Items | Number of Trucks | Number of Items |
| V Corps | 8 | 56 | 9,093 | 29 | 4,710 |
| VII Corps | 16 | 282 | 39,698 | 154 | 28,319 |
| 1st Support Brigade | 8 | 89 | 16,990 | 66 | 16,070 |
| Total | 32 | 427 | 65,781 1/ | 249 | 49,099 1/ |

Source: U.S. Army FESAE, Frankfurt

1/ Gross line items.

5. Theater Procurement (Purchase) Organization

The U.S. Army Facilities Engineers Europe, receive off-shore, European, procurement support through the U.S. Army Procurement Agency, Europe. Figure V-7 shows the overall organization of USAPAE. Central procurement is accomplished at the USAPAE Headquarters in Frankfurt. Decentralized procurement is effected by the Area Procurement Offices located as shown in Figure V-8. As of 1 November 1975 USAPAE was staffed as shown in Table V-4.

The Central Procurement Office in Frankfurt lets a set of Indefinite Delivery Type Contracts (IDTCs) having system-wide application. The Area Procurement Offices let smaller IDTCs and Blanket Puchase Agreements (BPAs) having area-wide application. To facilitate use of the IDTCs and BPAs, USAPAE appoints "Ordering Officers" within the organizations requiring support. This arrangement is illustrated in Figure V-9.

a. Overall Procurement Program. Of a $392.8 million procurement program in Fiscal Year 1975, $333.4 million (85%) was obligated in Germany. The estimated procurement program for Fiscal Year 1976 exceeds $425 million. Major categories (i.e., project areas expected to exceed $10 million) are as follows:

## US ARMY PROCUREMENT AGENCY, EUROPE

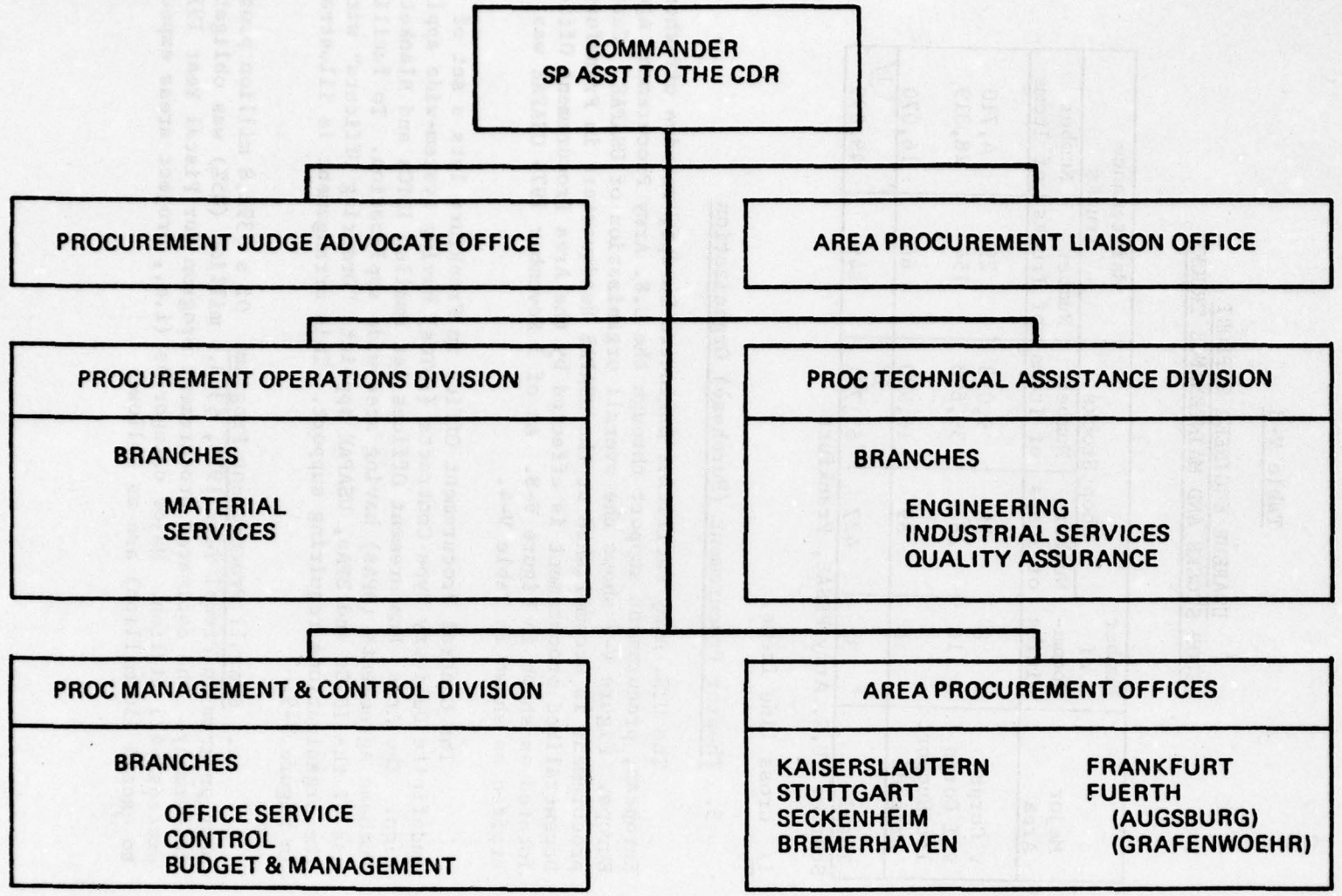



Figure V-7

## LOCATION OF USAPAE PROCUREMENT OFFICES AND RESIDENCIES




LEGEND:

- 1st Support Brigade
- Vth Corps
- VIIth Corps
- Residencies
- Area Offices
- USAPAE

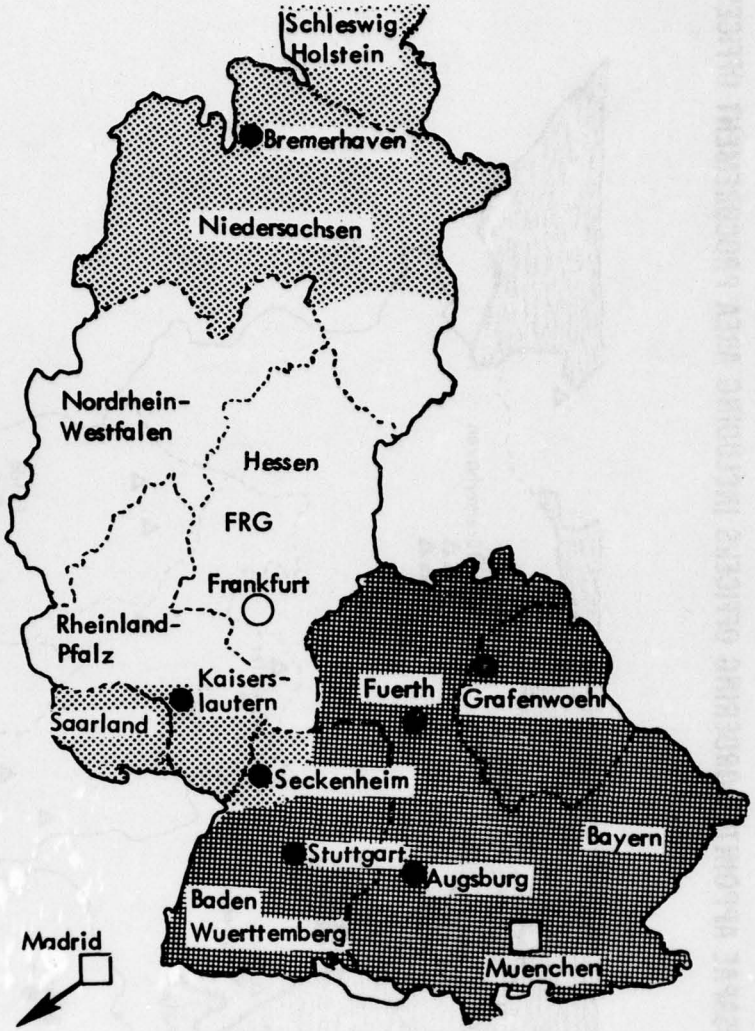



Figure V-8

## USAPAE APPOINTED ORDERING OFFICERS INCLUDING AREA PROCUREMENT OFFICES




Figure V-9

Table V-4

USAPAE STAFFING

| Organization | Military | | DA Civilians | Local Nationals | Total |
|---|---|---|---|---|---|
| | Officer | Enlisted | | | |
| Office of Commander | 1 | 0 | 2 | 0 | 3 |
| Judge Advocate Office | 2 | 0 | 3 | 0 | 5 |
| Area Liaison Office | 1 | 0 | 0 | 2 | 3 |
| Mgmt & Control Div. | 0 | 3 | 11 | 19 | 33 |
| Procurement Operations Division | 5 | 0 | 11 | 43 | 59 |
| Technical Assistance Division | 1 | 0 | 9 | 44 | 54 |
| Area Procurement Offices | 1 | 1 | 35 | 130 | 167 |
| Total | 11 | 4 | 71 | 238 | 324 |

Source: USAPAE, Frankfurt

| Category | Estimated FY 1976 Expenditures |
|---|---|
| Utilities (gas, water, electric, steam) | $100 million |
| Repair & Utilities (R&U) Projects | 84 million |
| Solid Fuels Program(s) | 82 million |
| POL | 76 million |
| U.S. Army Maintenance Plant (Mainz) | 33 million |
| Packing & Containerization (plus local drayage) | 15 million |
| Communications | 14 million |
| R&U Supplies | 13 million |

b. FE Procurement Support. The procurement offices visited estimated that 30% to 50% of their workload was in support of facilities engineering operations; however, this estimate included contracts for FE services and construction as well as utilities and materiel. Of the eight major procurement areas listed above, several, including utilities, R&U projects, fuels, and R&U supplies, are related directly or indirectly to FE operations and responsibilities. Of these, the $13 million R&U supplies procurement effort is most directly related to the materiel support analysis of this Study. The value of R&U supplies procurement in Europe for Fiscal Year 1975 was approximately $11 million; purchases/orders were effected by the six Area Offices as follows:

| Area Office | $ Value of FY 1975 R&U Procurement |
|---|---|
| Frankfurt | $5.3 million |
| Fuerth | 2.6 million |
| Seckenheim | 1.3 million |
| Stuttgart | 0.8 million |
| Kaiserslautern | 0.6 million |
| Bremerhaven | 0.3 million |

A significant portion of materiel support to the FE is effected under IDTCs let by the central procurement office in Frankfurt. Purchase orders and BPAs let by the Area Offices also account for a significant part of the FE materiel procurement.

(1) The USAPAE IDTCs. During Fiscal Year 1975 the USAPAE had over sixty IDTCs for FE related support. These IDTCs ranged from industrial gases (FSC 6830), lighting fixtures (FSC 6220), and plumbing fixtures and accessories (FSC 4510), commodity areas for which USAPAE has Single Service Coordinated Procurement Assignments, to include traffic signs (FSC 9905), bulk construction materiel (FSC 5610), and hardware (FSG 53). A few examples of such IDTCs are as follows:

EXAMPLE #1: Plumbing Supplies and Accessories (FSC 4510)

Number of Items - 58
Minimum Order Value - 250 DM (approximately $100)
Delivery - 3 weeks from receipt of Delivery Order
Prices - Based on estimated requirements by District
Estimated Annual Volume - over $100,000

EXAMPLE #2: Screws, Nails, and Pins (FSC 5305)

Number of Items - 75 (modifications to add and delete)
Minimum Order Value - 200 DM (approximately $80)
Delivery - 2 to 3 weeks from receipt of Delivery Order
Prices - Based on estimated requirements by District
Estimated Annual Volume - over $10,000

EXAMPLE #3: Hardware; e.g., door handles, hinges, keys (FSC 5340)

Number of Items - 49
Minimum Order Value - 600 DM (approximately $240)
Delivery - 6 weeks from receipt of Delivery Order
Prices - Based on single estimate for Germany
Estimated Annual Volume - over $40,000

Many of the IDTCs have been terminated and/or are in the revision process. Two large, expanded ones currently (November-December 1975) in the solicitation state are for Plumbing Fixtures and Accessories and Electrical Supplies. Several key features of these are outlined below:

Type of Contract: Firm fixed price indefinite delivery type - Requirements Contract.

Description of Supplies: "Plumbing Fixtures and Accessories," 315 items are identified and described using 117 pages of the USAFESAE catalog for FSC 4510. "Electrical Supplies," 541 items are identified and described using 168 pages of the USAFESAE catalog for FSCs 5920 through 5975.

Pricing: Offered unit prices shall be applicable for delivery free on board (FOB) any location within the following specified areas: (see Figure V-10 for a sample showing estimated quantities by area and total).

| Area | All Items for: |
|---|---|
| 1 | Baden/Wuerttemberg |
| 2 | Hessen |
| 3 | Nordbayern |
| 4 | Rheinland-Pfalz and Saarland |
| 5 | Suedbayern |
| 6 | 7th Army Training Center, Grafenwoehr |

Desired Delivery: The solicitation calls for delivery for the "Plumbing" items as follows: 2 weeks from the delivery order (DO) is desired; an alternative of 4 weeks is suggested; a "contractors proposal" is permitted. For the "Electrical" supplies, 4 weeks from the DO is "desired," 6 weeks if "required"; a contractor's alternate proposal is permitted.

Ordering Limitations: A minimum order value of 500 DM (approximately $200) is listed in the "Plumbing" items solicitation. The offerer is provided the opportunity to list a minimum order value in the "Electrical" items solicitation. Maximum order values are 20,000 DM for a single line item or 40,000 DM for a combination of line items on both solicitations.

Normally, materiel is obtained from the IDTCs described above as follows:

## EXTRACT OF U.S. ARMY EUROPE IDTC SOLICITATION

### SCHEDULE II

### ESTIMATED QUANTITIES AND PRICES OFFERED

| Line Item | Stock Number | Catalog Page No. | | AREA 1 | AREA 2 | AREA 3 | AREA 4 | AREA 5 | AREA 6 | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| 88. | 4510-V02-8357 | 4510-38 | EA | 709 | 169 | | 652 | 870 | 200 | 2,600 |
| | | | DM | | | | | | | |
| 89. | 4510-V02-8358 | 4510-39 | EA | 1348 | 100 | 300 | | | 50 | 1,798 |
| | | | DM | | | | | | | |
| 90. | 4510-V02-8359 | 4510-39 | EA | 561 | | | 638 | 250 | | 1,449 |
| | | | DM | | | | | | | |
| 91. | 4510-V02-8360 | 4510-40 | EA | 246 | | 300 | 48 | | | 594 |
| | | | DM | | | | | | | |
| 92. | 4510-V02-8361 | 4510-41 | EA | 1470 | 1210 | | | 1650 | 140 | 4,470 |
| | | | DM | | | | | | | |
| 93. | 4510-V02-8362 | 4510-41 | EA | 121 | | | 612 | | | 733 |
| | | | DM | | | | | | | |
| 94. | 4510-V02-8363 | 4510-42 | EA | 76 | | | | 120 | | 196 |
| | | | DM | | | | | | | |
| 95. | 4510-V02-8364 | 4510-42 | EA | | | | | 180 | 10 | 190 |
| | | | DM | | | | | | | |
| 96. | 4510-V02-8367 | 4510-43 | EA | 60 | | | 84 | | 40 | 184 |
| | | | DM | | | | | | | |
| 97. | 4510-V02-8368 | 4510-44 | EA | 115 | | | | | | 115 |
| | | | DM | | | | | | | |
| 98. | 4510-V02-8369 | 4510-44 | EA | 252 | 138 | 260 | 102 | 325 | 60 | 1,137 |
| | | | DM | | | | | | | |
| 99. | 4510-V02-8370 | 4510-45 | EA | | 43 | 100 | | | | 143 |
| | | | DM | | | | | | | |

Figure V-10

— An FE employee (e.g., an individual in the Materiel Control Office) or an FE support activity employee (e.g., an individual in a main warehouse or subwarehouse) identifies the materiel requirement to an item in the USAFESAE catalog.

— The USAFESAE catalog number is then included on a requisition/purchase request forwarded to an Area Procurement Office.

— The Area Procurement Office relates the item to a specific IDTC and prepares a Delivery Order against the IDTC let by the USAPAE Central Office in Frankfurt.

(2) The Area Procurement Offices

In addition to ordering FE materiel under the USAPAE, Headquarters IDTCs, the Area Procurement Offices can use Imprest Funds, Purchase Orders, and Blanket Purchase Agreements to support FE requirements. Generally, where BPAs are used, ordering is accomplished by personnel in the Area Procurement Office as well as by FE or FE support personnel who have been designated ordering personnel.

The character of procurement actions by the Area Procurement Offices varies somewhat by area; and, therefore, is discussed as part of the FE and FE support pictures at Community level.

6. Miscellaneous Information Re: European FE/CE Support

a. Materiel Identification

Three Army FE and three Air Force CE organizations (see Chapter XIV) were observed in Europe. In each case the local FE/CE personnel or local commander supported by the FE/CE pointed out the following factors:

-- Real estate and facilities in Europe range from very old to relatively new;

-- Real estate and facilities, including a wide range of equipment supported by the FE/CE are of European construction/manufacture;

-- Certain major and minor construction and utilities systems are controlled by local rules and regulations;

-- Facilities supported by the FE/CE are frequently of the same configuration as that supported by the local economy;

-- A wide range of equipment (e.g., washers, dryers, and stoves) obtained from CONUS must also be supported; and

-- Policy changes, such as emphasis on gold flow reduction during one year, have an impact on FE/CE support.

In aggregate, these factors result in a wide range of facilities, utility systems, and equipment that require support. Standardization is not the name of the game. Hence, a wide range of supply sources are used, and many of them are, of necessity, within the theater. This situation coupled with, on occasion, a language communication problem can make materiel identification for FE/CE support difficult.

To identify materiel and sources of supply FE/CE planning and materiel control, personnel use the various Federal Supply System catalogs, identification lists, cross-reference lists, and management data lists. However, initial identification is most heavily dependent on vendor catalogs for both CONUS and European vendors. In addition, all activities, Army and Air Force, made reference to the U.S. Army "RPMA (Real Property Maintenance Activity) Supply Catalog" and the "RPMA Supply, Individual Determination and Findings" item listing as tools for identifying FE/CE support items.

The "RPMA Supply Catalog" and RPMA Supply, Individual Determination and Findings" listing were referred to and praised by FE/CE personnel and procurement personnel at the Army and Air Force activities. These documents and their contents are described in the following paragraphs.

b. The RPMA Supply Catalog

(1) Preparation. The RPMA Supply Catalog was developed by and is maintained by the USAFESAE Catalog Branch in Wuerzburg. The organization is staffed by a Chief and three Catalog Assistants, all German nationals.

(2) Purpose. The catalog is designed to provide identification data of RPMA items in commonly used RPMA Federal Supply Classes (FSCs) to Facilities Engineer activities within the theater.

(3) Content. The catalog is composed in three sections, an Identification List, a National Stock Number Index, and a Cross Reference List. Their respective contents are as follows:

(a) Identification Data List

1 Nomenclatures: Nomenclatures are in alphabetical sequence and are bilingual (English and German).

2 Stock Numbers: Standard items are identified by National Stock Numbers (NSNs) from Current Federal Supply Catalogs. Nonstandard items are identified by Engineer Command Management Code Numbers (ECMCNs) assigned by the Catalog Branch. ECMCNs are temporary stock numbers. The first four (4) digits represent the Federal Supply Class. The next three (3) digits represent the Engineer Identification (i.e., V02). The remaining four (4) digits represent a serial number, which identifies each individual item.

3 Unit of Issue: The unit of issue designations are approved abbreviations per Catalog Manual M 1-7.

4 Illustrations: Illustrations in this catalog are typical rather than exact representatives, since the products of different manufacturers may vary somewhat in appearance.

(b) National Stock Number and ECMCN Index. This section contains all national stock numbers and Engineer Command Management Control Numbers in numeric sequence used in the Catalog.

(c) Cross Reference Data List. This list indicates stock numbers previously assigned by the Catalog Branch converted to National Stock Numbers or new ECMCNs and references to deletions and substitutions.

c. Volume. The total catalog contains over 8,000 RPMA support items and measures about 16 linear inches. A review of the catalog for 16 Federal Supply Classes shows that about half (48%) of the items are identified by NSNs and the remainder by European FE stock numbers. Table V-5 shows the number of items and type of item identifying number for the 16 FSCs.

d. RPMA Supply, Individual Determination and Findings

(1) Purpose. To facilitate the identification and procurement, in Europe, of RPMA support items the U.S. Army FESAE has developed a listing of approximately 1,500 items which are "not normally available in CONUS and may be purchased off-shore without any additional Flow of Gold (FOG) determination." Items in the listing have an estimated annual demand in excess of $500. Army and Air Force FE/CE organizations and their supporting organizations are invited to recommend additions to the listing based on their local or regional experience.

Table V-5

RPMA CATALOG IDENTIFICATIONS
U.S. ARMY EUROPE

| FSC | Class Name | Type of ID No. | | Total |
|---|---|---|---|---|
| | | NSN | ECMCN* | |
| 4010 | Chain and Wire Rope | 39 | 2 | 41 |
| 4020 | Fiber Rope, Cordage and Twine | 22 | 2 | 24 |
| 4030 | Fittings for Rope, Cable & Chain | 24 | 0 | 24 |
| 4140 | Fans, Air Circulators and Blower Equipment | 1 | 8 | 9 |
| 4210 | Fire Fighting Equipment | 16 | 8 | 24 |
| 4240 | Safety and Rescue Equipment | 15 | 2 | 17 |
| 4320 | Power and Hand Pumps | 1 | 14 | 15 |
| 4330 | Centrifugals, Separators, and Pressure and Vacuum Filters | 0 | 2 | 2 |
| 4520 | Space Heating Equipment and Domestic Water & Heaters | 24 | 72 | 96 |
| 4530 | Fuel Burning Equipment Units | 0 | 302 | 302 |
| 5330 | Packings & Gasket Materials | 1 | 0 | 1 |
| 5305 | Screws | 285 | 143 | 428 |
| 5306 | Bolts | 89 | 118 | 207 |
| 5310 | Nuts and Washers | 41 | 55 | 96 |
| 5315 | Nails, Keys and Pins | 155 | 57 | 212 |
| 5320 | Rivets | 25 | 19 | 44 |
| 16 | Total | 738 | 804 | 1,542 |

Source: RPMA Catalog

* Because ECMCNs contain the digits "VO," they are also referred to as "V-numbers."

(2) Overall Content

The listing, arranged in identification number sequence, within FSC, illustrates: the identification number (NSN or ECMCN), the unit of issue, descriptive data (nomenclature, size, and on occasion related item), unit price, estimated annual requirement, and extended cost for estimated annual requirement quantity. The items illustrate the following characteristics:

.. Item Unit Price Range - $.02 to $600
.. Estimated Item Annual Procurement Quantity Range - 5 to 780,000
.. Estimated Item Annual Dollar Value Range - $502 to $73,250

Table V-6 summarizes the contents of the Fiscal Year 1976 listing, by FSC. The 1,431 line items with an estimated procurement value over $5 millions represent a significant portion of the anticipated procurement for support of the U.S. Army Facilities Engineer in Europe. Other significant factors shown by Table V-6 are:

- 69 FSCs reflect anticipated annual requirements.
- 21 of the 69 FSC show only one item having an anticipated requirement over $500.
- Approximately 20 FSCs dominate the actions; itemwise and value-wise.

(3) The Top 20. Table V-7 arrays the 20 FSCs (from Table V-6) having the highest estimated annual value of demand from highest to lowest. Table V-7 demonstrates that five FSCs having the highest estimated annual demand value represent about 43% of the items and 55% of the total estimated demand value. The Table also shows that the top 20 FSCs (less than one-third of the total FSCs) contain about 90% of the total items and represent nearly 95% of the total estimated procurement value.

B. FACILITIES ENGINEER DATA

1. Functions and Operations. The primary mission of each of the community Facility Engineer is to accomplish and supervise the Real Property Maintenance Activities on U.S. Government installations under the jurisdication of the appropriate Community Commander. Figure V-11 portrays the basic organizational structure which has been approved for use to provide the most effective use of assigned personnel at each of the three communities visited.

a. Type of Work. In general, all FE USAREUR activities perform the same type "world-wide" RPMA function for maintenance of U.S. Government facilities which are generated by the continuing requirement for utilities, normal change in physical upkeep of real property, requirements for minor construction of facilities, custodial services, and/or other changes in mission to meet operational requirements of installation/area(s) of responsibility. To accomplish the work assignments, certain categories of work have been designated so that the FE can group the various RPMA requirements into certain management areas. These management areas are basically divided into three major categories. Through this system, management methods have been adopted to control the work so that a realistic evaluation of performance can be accomplished. These categories/groupings are: Standing Operation Orders (SOOs), Service Orders (SOs), and Individual Job Orders (IJOs).

Table V-6

FACILITIES ENGINEER SUPPORT ACTIVITY EUROPE
RPMA SUPPLY, INDIVIDUAL DETERMINATIONS AND FINDINGS SUMMARY
(FY 1976)

| | Items | | Estimated Annual Value | | | Items | | Estimated Annual Value | | | Items | | Estimated Annual Value | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FSC | Number | Percent | Dollar Value | Percent | FSC | Number | Percent | Dollar Value | Percent | FSC | Number | Percent | Dollar Value | Percent |
| 3439 | 4 | .28 | $10,089 | .20 | 5335 | 2 | .14 | $2,648 | .05 | 6145 | 61 | 4.26 | $131,462 | 2.62 |
| 4010 | 1 | .07 | 2,600 | .05 | 5340 | 181 | 12.64 | 722,791 | 14.41 | 6210 | 50 | 3.49 | 175,032 | 3.49 |
| 4140 | 2 | .14 | 13,390 | .27 | 5350 | 1 | .07 | 926 | .02 | 6230 | 1 | .07 | 1,446 | .03 |
| 4210 | 5 | .35 | 13,355 | .27 | 5420 | 1 | .07 | 559 | .01 | 6240 | 77 | 5.38 | 381,635 | 7.61 |
| 4320 | 1 | .07 | 586 | .01 | 5510 | 1 | .07 | 820 | .02 | 6250 | 16 | 1.11 | 48,617 | .97 |
| 4510 | 210 | 14.67 | 851,795 | 16.98 | 5520 | 4 | .28 | 15,979 | .32 | 6350 | 6 | .42 | 9,066 | .18 |
| 4520 | 51 | 3.56 | 164,850 | 3.29 | 5610 | 5 | .35 | 9,926 | .20 | 6625 | 1 | .07 | 1,112 | .02 |
| 4530 | 7 | .48 | 11,689 | .23 | 5620 | 4 | .28 | 10,277 | .20 | 6630 | 1 | .07 | 518 | .01 |
| 4710 | 36 | 2.51 | 96,683 | 1.93 | 5640 | 3 | .21 | 16,987 | .34 | 6645 | 1 | .07 | 4,830 | .10 |
| 4720 | 2 | .14 | 2,692 | .05 | 5650 | 3 | .21 | 9,692 | .19 | 6685 | 9 | .62 | 10,010 | .20 |
| 4730 | 109 | 7.61 | 202,438 | 4.04 | 5660 | 4 | .28 | 14,301 | .29 | 6750 | 3 | .21 | 7,786 | .16 |
| 4820 | 91 | 6.35 | 191,513 | 3.82 | 5670 | 1 | .07 | 1,544 | .03 | 6810 | 13 | .90 | 68,597 | 1.37 |
| 5120 | 10 | .69 | 14,393 | .29 | 5680 | 1 | .07 | 3,367 | .07 | 6850 | 1 | .07 | 2,028 | .04 |
| 5130 | 3 | .21 | 11,664 | .23 | 5920 | 70 | 4.89 | 278,616 | 5.56 | 7105 | 6 | .42 | 23,201 | .46 |
| 5133 | 1 | .07 | 1,781 | .04 | 5925 | 12 | .83 | 12,770 | .25 | 7220 | 1 | .07 | 680 | .01 |
| 5136 | 1 | .07 | 5,580 | .11 | 5930 | 50 | 3.49 | 219,917 | 4.38 | 7230 | 25 | 1.74 | 132,088 | 2.63 |
| 5210 | 1 | .07 | 2,352 | .05 | 5935 | 73 | 5.10 | 509,121 | 10.15 | 7820 | 2 | .14 | 15,023 | .30 |
| 5305 | 2 | .14 | 4,668 | .09 | 5940 | 10 | .69 | 8,334 | .17 | 8010 | 1 | .07 | 10,945 | .22 |
| 5306 | 38 | 2.65 | 62,774 | 1.25 | 5945 | 2 | .14 | 1,884 | .04 | 8020 | 2 | .14 | 1,800 | .04 |
| 5310 | 2 | .14 | 1,564 | .03 | 5950 | 1 | .07 | 660 | .01 | 8030 | 5 | .35 | 7,692 | .15 |
| 5320 | 1 | .07 | 10,860 | .22 | 5970 | 12 | .83 | 61,034 | 1.22 | 8040 | 3 | .20 | 2,412 | .05 |
| 5325 | 1 | .07 | 535 | .01 | 5975 | 40 | 2.79 | 194,294 | 3.87 | 8305 | 2 | .14 | 3,430 | .07 |
| 5330 | 35 | 2.44 | 59,178 | 1.18 | 5995 | 1 | .07 | 850 | .02 | 9905 | 48 | 3.35 | 141,853 | 2.83 |
| | | | | | | | | | | Total | 1,431 | 99.85 | $5,015,589 | 100.02 |

Source: European Field Research
NOTE: Percentages are not exactly 100.00 due to rounding.

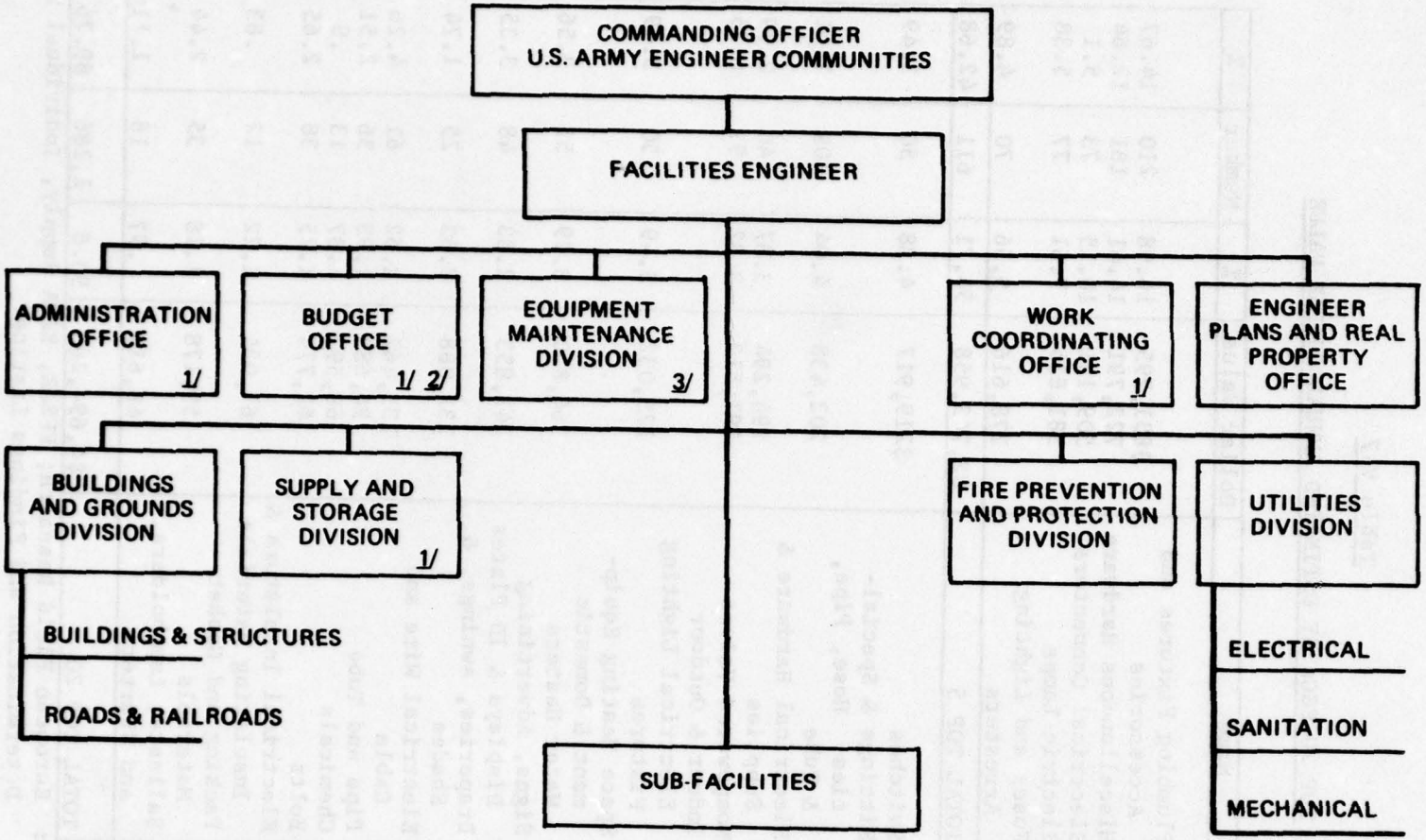
## Table V-7

## TOP 20 FSCs BY ESTIMATED ANNUAL DOLLAR VALUE

| FSC | Name | Dollar Value | % | Number | % |
|---|---|---|---|---|---|
| 4510 | Plumbing Fixtures and Accessories | $851,795 | 16.98 | 210 | 14.67 |
| 5340 | Miscellaneous Hardware | 722,791 | 14.41 | 181 | 12.64 |
| 5935 | Electrical Connectors | 509,121 | 10.15 | 73 | 5.1 |
| 6240 | Electric Lamps | 381,635 | 7.61 | 77 | 5.38 |
| 5920 | Fuses and Lighting Arresters | 278,616 | 5.56 | 70 | 4.89 |
| | TOTAL TOP 5 | $2,743,958 | 54.71 | 611 | 42.68 |
| 5930 | Switches | $219,917 | 4.38 | 50 | 3.49 |
| 4730 | Fittings & Specialties: Hose, Pipe, & Tube | 202,438 | 4.04 | 109 | 7.61 |
| 5975 | Electrical Hardware & Supplies | 194,294 | 3.87 | 40 | 2.79 |
| 4820 | Nonpowered Valves | 191,513 | 3.82 | 91 | 6.35 |
| 6210 | Indoor & Outdoor Electrical Lighting Fixtures | 175,032 | 3.49 | 50 | 3.49 |
| 4520 | Space Heating Equipment & Domestic Water Heaters | 164,850 | 3.29 | 51 | 3.56 |
| 9905 | Signs, Advertising Displays & ID Plates | 141,853 | 2.83 | 48 | 3.35 |
| 7230 | Draperies, Awnings, & Shades | 132,088 | 2.63 | 25 | 1.74 |
| 6145 | Electrical Wire and Cable | 131,462 | 2.62 | 61 | 4.26 |
| 4710 | Pipe and Tube | 96,683 | 1.93 | 36 | 2.51 |
| 6810 | Chemicals | 68,597 | 1.37 | 13 | .9 |
| 5206 | Bolts | 62,774 | 1.25 | 38 | 2.65 |
| 5970 | Electrical Insulators & Insulating Materials | 61,034 | 1.22 | 12 | .83 |
| 5330 | Packing and Gasket Materials | 59,178 | 1.18 | 35 | 2.44 |
| 6250 | Ballasts, Lampholders, and Starters | 48,617 | .97 | 16 | 1.11 |
| | TOTAL TOP 20 | $4,694,288 | 93.6 | 1,286 | 89.76 |

Source: European Field Research; FESAE, RPMA Supply, Individual Determination and Findings Listing.

**USAREUR FACILITIES ENGINEER**
**ORGANIZATIONAL CHART**
**(TYPICAL)**




1/ Located under the FE Management Division at VII Corps (Stuttgart).
2/ Not identified under the FE, 1st Support Brigade (Kaiserslautern).
3/ Located under Buildings and Grounds, V Corps (Frankfurt).

Figure V-11

b. Workload Generation. Figure V-12 portrays a typical Real Property Data Base which generates the FE workload. While some community areas may be larger or smaller, each FE must establish procedures by which RPMA can respond to or plan their workload generation. The principal office within the FE organization which controls the workload generation is the Work Coordinating Office (WCO). Most of the FE workload generation is unplanned and centers in the Service Order Category (Emergency, Urgent, or Routine). In most cases, the SOs for work are requested by telephone, followed by written requests into the Work Coordinating Office. Receipt clerks may transmit emergency or urgent work requirements direct to shops by intercom or telephone--or to service trucks by radio. Time limits are established to complete the job and vary according to experience (1-10 days). Service orders which exceed the established time limit are continuously reviewed to determine probable problem areas and to prevent an excessive number of uncompleted service orders in the shops.

(1) Standing Operation Order. Work scheduled within the category are recurring maintenance requirements for which FE personnel devote full time to selected areas on an annual or seasonal basis. Included in this category are scheduled inspections and preventive maintenance work performed on specified equipment and facilities at specified times or frequency. Included in this operation are such areas as operation of utility, water or sewage plants. Maintenance and services which require permanent crews include refuse collection, fire prevention, entomology services and custodial services; and for scheduled inspections or maintenance of air conditioning units, heating systems, or refrigeration units (mess halls), etc.

(2) Service Order. Service Orders are used for small jobs which do not exceed 16 man-hours of labor (2 man-days) and do not cost more than $350. These small jobs generally cover essential work that cannot be deferred to a future year and usually require the effort of one shop. Examples of this type work are minor electrical repairs, replace door lock and hinges, clean air conditioning motors, replace shower head, water heater trouble call, or replace broken windows. SOs fall into three categories: Emergency - takes priority over all other work orders - usually for protection of health, safety, or to prevent damage to property; Urgent - includes work where condition could cause an emergency, seriously offset morale, or has command emphasis; Routine - work can be accomplished on a first come first serve basis and causes slight inconvenience or unsightly condition.

(3) Individual Job Orders. The IJOs include work requirements which exceed the scope of Service Orders. IJOs involve maintenance, repair and minor construction of facilities, and are classified

DFAE STUTTGART

Stuttgart Community Real Property Base Data

| | |
|---|---|
| TOTAL INSTALLATION | 52 |
| FAMILY HOUSING AREAS | 11 (3595 APTS. 70 SINGLES) |
| TROOPS HOUSING AREAS | 20 |
| BOQ LOCATIONS | 6 (1173 ROOMS) |
| TRAINING AREAS | 4 |
| SUPPLY POINTS | 10 KAS AREAS |
| SCHOOL LOCATIONS | 5 |
| TOTAL BUILDINGS | 1,510 |
| SQ FT FLOOR SPACE (PERMANENT) | 19,726,950 |
| RAIL ROAD TRACK | 17,400 LIN FT |
| ROADS SURFACED | 1,048,500 SQ YD |
| PARKING OPEN STORAGE WALKWAYS | 1,549,000 SQ YD |
| AIRFIELD PAVEMENT | 222,630 SQ YD |
| IMPROVED GROUNDS | 1,967,700 ACRES |
| UNIMPROVED GROUNDS | 2,411,000 ACRES |
| HIGH PRESSURE BOILER PLANTS | 6 |
| LOW PRESSURE UP TO 3.5 MILL BTU | 673 |
| CHLORINATION STATIONS | 40 |
| SEWAGE PLANTS & LIFT STATIONS | 8 |
| GREASE TRAPS/GAS SEPARATORS | 200 |

Source: USAFAE

Figure V-12

as either minor or major jobs based on man-hour requirements. Minor job requirements are based on unforeseeable individual jobs which exceed 16 man-hours (2 man-days) and $200. Minor jobs are scheduled by shop supervisors and concern only one shop. Major jobs are the larger individual jobs which are known and programmed/planned for in advance. Major jobs are centrally scheduled and controlled by a master schedule and require the coordinated effort of several shops. (Multi-shop jobs are master scheduled regardless of man-hour requirement.) Normally, major individual jobs should account for about 75 percent of man-hours available for individual jobs. IJOs usually result in a Bill of Material (BOMs) which are requisitioned through appropriate supply channels.

c. Scheduling. Scheduling of FE workload is accomplished similar to CONUS installations. Job Order Requests (JORs) are referred to the Community Commander for approval action, or acted upon by the Area Facilities Engineer. Approvals are consistant with the Annual Work Plan and available resources. JORs for minor construction are placed in priority order by an impartical board of officers (Master Planning Board). JORs, which are approved by an appropriate authority, are then scheduled for accomplishment as maintenance and priority permit by the Work Coordinating Office. Table V-8 reflects the backlog of LJOs at the three FE activities visited.

Table V-8

BACKLOG INDIVIDUAL JOB ORDERS

| Installation | Awaiting Materiel 1/ | Awaiting 2/ Scheduling | Total LJOs |
|---|---|---|---|
| Kaiserslautern (10 Nov 75) | 278 (65.4%) | 147 (34.6%) | 425 |
| Frankfurt (30 Sep 75) | 389 (57.5%) | 287 (42.5%) | 676 |
| Stuttgart (27 Aug 75) | 37 (26.2%) | 104 (73.8%) | 141 |

1/ Materiel on order.
2/ Materiel on hand awaiting man-hours in shops.

AGE OF LJOs

| Installation | Months | | | | | |
|---|---|---|---|---|---|---|
| | Under 1 | 1 - 3 | 3 - 6 | 6 - 12 | over 12 | Total |
| Kaiserslautern 1/ | Not provided | | | | | |
| Frankfurt 1/ | Not provided | | | | | |
| Stuttgart | 39 | 136 | 177 | 212 | 112 | 676 |

1/ Requested, but not provided.

LJOs COMPLETED
(FY 1975)

| Installation | Number | Labor hours | Labor Cost | Materiel Cost | Equipmt Cost | Total Cost |
|---|---|---|---|---|---|---|
| Kaiserslautern | 1,545 | 121,791 | $469,743 | $218,069 | $15,425 | $703,237 |
| Frankfurt 1/ | Not provided | | | | | |
| Stuttgart 1/ | Not provided | | | | | |

1/ Requested, but not provided.
Source: Field Research

2. Supply Support. The Facilities Engineer activity obtains RPMA materiel from several sources as follows:

a. Shop and Preventive Maintenance Stocks. Includes a limited number of expendable supplies for routine maintenance operations. Shop stocks are limited to a 15-day stock level and are limited to the quantity and type required for Preventive Maintenance (PM) shop work. Quantities and type of items are approved by the Facilities Engineer and the Stock Record Accountable Officer. Shop stock is owned and accounted for by the responsible shop and the issue is made from the main or subwarehouse. Shop stocks are replenished on a weekly basis from the appropriate warehouse. (See Table V-9.)

b. Supplies for PM Trucks. Items for PM trucks are expendable supplies for routine PM maintenance requirements. PM truck stocks are limited to a 15-day stock level. Items duplicate those carried in the shop inventory, but are carried as a separate inventory from the regular shop stock. These stocks are carried aboard Mobile Vans/Trucks whose primary purpose is to provide PM service to outlaying facilities. PM trucks supplies are replenished from shop stock by the maintenance or repairman, usually when the stocks carried aboard the truck becomes low. No documentation is required to draw the items from shop stock; however, the shop foreman verifies that items are required prior to replenishment. (See Table V-10.)

c. Self Help Stores (SHIP Stores). A 15-day level of expendable self help type items which can be used by occupants to repair RPMA property in Government Quarters, or Officer/Enlisted Billets occupied by U.S. Army personnel. Items consist of such things as stove/range burner reflectors (aluminum) trays, fluorescent light bulbs or regulator units, cabinet and dresser drawer knobs/handles, small amounts of paint to touch up areas, fuses, outdoor protective light covers, etc. Stuttgart community area contained 6 SHIP Stores with 198 line items in each store and is considered typical of other SHIP Store locations in Europe.

Table V-9

SHOP STOCKS

| Regional Area | Locations | Shop Stores | Number Line Items |
|---|---|---|---|
| V Corps | 8 | 56 | 9,093 |
| VII Corps | 28 | 282 | 39,698 |
| 1st Support Brigade | 8 | 89 | 16,990 |
| Total | 44 | 427 | 65,781 |

Source: Field Research

Table V-10

PM MAINTENANCE TRUCKS

| Required Areas | Location | Number of Trucks | Number of Line Items |
|---|---|---|---|
| V Corps | 8 | 29 | 4,700 |
| VII Corps | 23 | 154 | 28,319 |
| 1st Support Brigade | 8 | 66 | 16,070 |
| Total | 39 | 249 | 49,089 |

Source: Field Research

d. Residual Area. Materiel stored in the Residual Area consists of items that are left over from completed work orders, or from LJOs that were cancelled. Residual materiel held by Stuttgart FE was estimated at about 200 line items, valued between $75,000 to $100,000.

e. Blanket Purchase Agreements. Blanket Purchase Agreement authorization has been authorized for the FE procurement of Local Purchase (LP) stocked or nonstocked (fringe) items up to $550. At Kaiserslautern and Frankfurt, BPA requests were forwarded to the Area Procurement Offices for ordering; while at Stuttgart, the FE Work Coordinating Office had a designated individual authorized by the Area Procurement Office to order and receipt for BPA local purchase items direct from the vendor. Procedure was that the approved SOOs, LJOs, or Work Order(s) were first processed through the warehouse. If item(s) were "not available," the issue document was so indicated and returned to the FE Work Coordinating BPA clerk for purchase. The BPA clerk attemped to solicit at least two or three telephone bids to obtain the lowest price from local vendors through the use of 27 BPAs which were established for the Area Procurement Office. A BPA procurement document was forwarded to the vendor who delivered the item to the appropriate FE work shop. After delivery by the vendor, the BPA clerk returned a signed copy of the procurement document to the vendor for presentation to the Finance Office for cash payment. In addition, one copy of the purchase document was sent to the FE warehouse record clerk for posting and one copy was retained for BPA clerk's file. At the time of the Team visit, the Stuttgart BPA FE clerk had just recently been provided a $25,000 fund limitation allotment by the Comptroller, against which he could obligate BPA local purchase monies for FE materiel. Delivery time for majority of materiel purchased by the FE BPA clerk under this system ranged from 2 hours to 10 days with most under the 10 days. The 1st Support Brigade provided the following data regarding BPA purchases made at the following locations for work stoppage materiel.

1st SUPPORT BRIGADE - BPA BY LOCATION
(Main and Subwarehouses)

| Location | FY 1975 | FY 1976 (Target) | |
|---|---|---|---|
| Kaiserslautern | $30,000 | $40,000 | (main warehouse) |
| Mannheim | 67,430 | 48,000 | (main warehouse) |
| Heidelberg | 69,570 | 44,000 | (subwarehouse) |
| Karlsruhe | 35,535 | 34,000 | (subwarehouse) |
| Pirmasens | 27,000 | 30,000 | (subwarehouse) |
| Zweibruecken | 7,800 | 8,000 | (subwarehouse) |
| Worms | 7,861 | 4,000 | (shop stocks) |
| Total | $245,196 | $204,000 | |

f. Holding Area Stocks. Materiel in "Holding Area" consists of items listed on Bills of Material being held for approved Work Orders. FE materiel coordinator collects the BOM materiel from various sources and hold it until released for work order accomplishment.

g. Main/Subwarehouse Stocks. A list of items authorized to be carried by FE support activities which are stored in either a main warehouse or a subwarehouse. These stocks are based on demand history and may be either National Stock Number items (Inventory Control Point/General Services Administration (ICP/GSA)), indigenous materiel or non-military commercial type items. Range of stock varies from 650 to 5,000 line items depending on area location and types of facilities supported.

C. THEATER SUPPLY ORGANIZATION

1. FE Supply Support. In the European Theater, RPMA supply support is under operational control of the Area Facility Engineer, while technical guidance for supply management is received from USAFESAE. There are seven major locations throughout Europe where FE Item Stock Record Accountability is maintained. Each SRA operates a "Main Supply Warehouse" where the RPMA backup stock (operating levels) are retained until transferred to various "Subwarehouses" stockage location throughout Europe who directly support the USAREUR RPMA FE operation in the forward operating areas. There are a total of 31 subwarehouses activities which are supported by the Main Warehouse SRA activities. Table V-11 provides a brief overview of main warehouse locations and the total number of subwarehouses supported.

Table V-11

MAIN AND SUBWAREHOUSES

| Main Warehouse Location | SRA | Number Main Warehouses | Number Sub-warehouses |
|---|---|---|---|
| V Corps: | | | |
| Giessen | 1 | 1 | 7 |
| VII Corps: | | | |
| Stuttgart | 1 | 1 | 3 |
| Augsburg | 1 | 1 | 5 |
| Nuernberg-Fuerth | 1 | 1 | 8 |
| Grafenwoehr (7 Atc) | 1 | 1 | 4 |
| 1st Support Brigade | | | |
| Kaiserslautern | 1 | 1 | 2 |
| Mannheim | 1 | 1 | 2 |
| Bremerhaven | 0 | 1 | 0 |
| Total | 7 | 8 | 31 |

Source: Field Research

a. Authorized Stock Levels

Facilities Engineering supplies requisitioned and carried in the FE supply account include construction materiel, general hardware, RPMA parts, and hand tools used in the maintenance of real property mission. As a general rule, repair parts for commercial equipment maintained by the FE to support the RPMA mission are purchased from local sources (local/retail sources) through authorized small purchase procedures (BPAs) by using the Facilities Engineer stock fund account, or installation operation funds (O&M), as applicable.

Stockage for these items is normally based upon days of supply, although authority has been provided for optional use of economic order quantity procedures. Since most FE stock records are manual, days of supply computation are simpler and most frequently used. The requisitioning objective (RO) of the SRAs consists of a 75-day stockage objective computed as follows:

-- 75-Day Stockage Objective
60-day operational level
15-day safety level
+ actual OST computed in 15-day multiples
-- EOQ Stockage Principal

Where the Economic Order Quantity (EOQ) principal is adopted, EOQs will be established for stockage items which have a unit cost of $5.00 or less. The operating level for EOQ items will be 360 days, or $100 annual demand, whichever is less.

The stockage objective of the subwarehouses is:

-- 45-Day Stockage Objective
  -- 30-day operating level
  -- 15-day safety level
  -- actual OST

To authorize an item for stock, at least three demands in the most recent 90 days must be recorded, and foreseeable continued requirement must be established. Initial stockage can also be obtained based upon anticipated (engineering estimate) usage over a 90-day period. After the initial 90 days, recomputation based upon actual demands (quantities) is made. Subsequent recomputations are required each time an item is reordered. Seasonal items are also stocked, and quantities vary according to past usage and anticipated requirements for the coming season. These items are reordered as used and a 90-day additional stockage is anticipated for retention purposes. The reorder point is normally established at one fifth of the 75 days stockage objective (operating level (60 days) + safety level (15 days) plus OST converted into units.

Items carried or processed through the SRA generally fall into two separate categories--stocked and nonstocked items:

-- Stocked Items. Stocked items are carried on supply records and stored in the FE Self Service Center or the main-subwarehouses. Stockage requirements are based on usage history by the various FE shops. In USAREUR, the FE stocks are considered as O&M funded materiel. Customer funds are recycled through the appropriate SRA O&M Finance and Accounting system to U.S. Army Material Management Activity Europe (USAMMAE) to replenish the USAREUR stock fund account. Reimbursable O&M funds are periodicallly allocated/transferred to FE stock record accounts by Corps Comptroller activities based on future FE SRA supply requirements established by "Letters of Intent" from Community Commanders to purchase supplies from the applicable FE Stock Record Account.

-- Nonstocked Items. (Fringe items) These items are not carried or stocked in FE supply account. Nonstocked items are those items required for special requirements of a nonrecurring nature (BOMs, Emergency Work Orders, Special Projects, etc.). Unit

O&M funds are cited when materiel is requisitioned or procured from USAMMAE. As materiel is received, it is forwarded direct to the requesting activity or placed in the Central Materiel Holding Area (BOMs) until a work release date from the FE scheduling activity is received.

b. Stock Replenishment. As materiel is issued, bin cards (DA Form 5-107) are manually posted. As the quantity for reorder is reached, a reorder card is forwarded to SRA stock control section for resupply by the main warehouse, local purchase order or Military Standard Requisitioning and Issue Procedures (MILSTRIP) requisition processing. After resupply, purchase or requisition action, the reorder card is returned to the appropriate warehouse and filed pending receipt of the materiel. All supply transactions are manually prepared. If stocks are available from the main warehouse, the items are transferred. If not available, then the SRA may forward an O&M funded MILSTRIP requisition to USAMMAE for retransmission to the appropriate ICP/GSA source, (USAMMAE cites USAREUR stock fund money for DoD wholesale procurement) or request local procurement action. Purchase requests for LP stocked items are forwarded by the SRA to the Area Procurement Office for local purchase action on the local economy. Materiel requisitioned, either through USAMMAE (CONUS) or the Area Procurement Office, is shipped directly to the SRA account (main warehouse) and are subsequently transferred to the subwarehouses as stock replenishment or issued to FE customers, as appropriate. USAREUR FE SRA warehouse stocks are considered as O&M funded materiel. Customer O&M funds are transferred to the SRA to replenish the SRA account when issues are made. When requisitions are submitted to USAMMAE or Central Area Procurement, SRA O&M funds are cited. These O&M funds are used to reimburse the USAREUR (USAMMAE) stock fund when materiel is requisitioned from the ICP/GSA source in CONUS. Figure V-13 displays the normal document flow which is followed when FE materiel is requisitioned through either USAMMAE or local procurement. MILSTRIP requisitions (CONUS) are generally utilized for common stock listed items such as wire rope, steel pipe, hand tools, common hardware, fencing, paint and paint products, floor tile, and steel bars or sheet, etc. Off-Shore Procurement (local economy) includes such items as sanitary supplies, metric hardware, gasket materiel, building materiel, road construction materiel, and electrical materiel and emergency supplies, etc.

c. Stock Fund Control

A primary objective in establishing a separate Facilities Engineer supply activity under a dollar value accounting system was to simplify item accounting and supply procedures. This is accomplished

## REQUISITION FLOW FOR FE SUPPLIES
## US ARMY, EUROPE

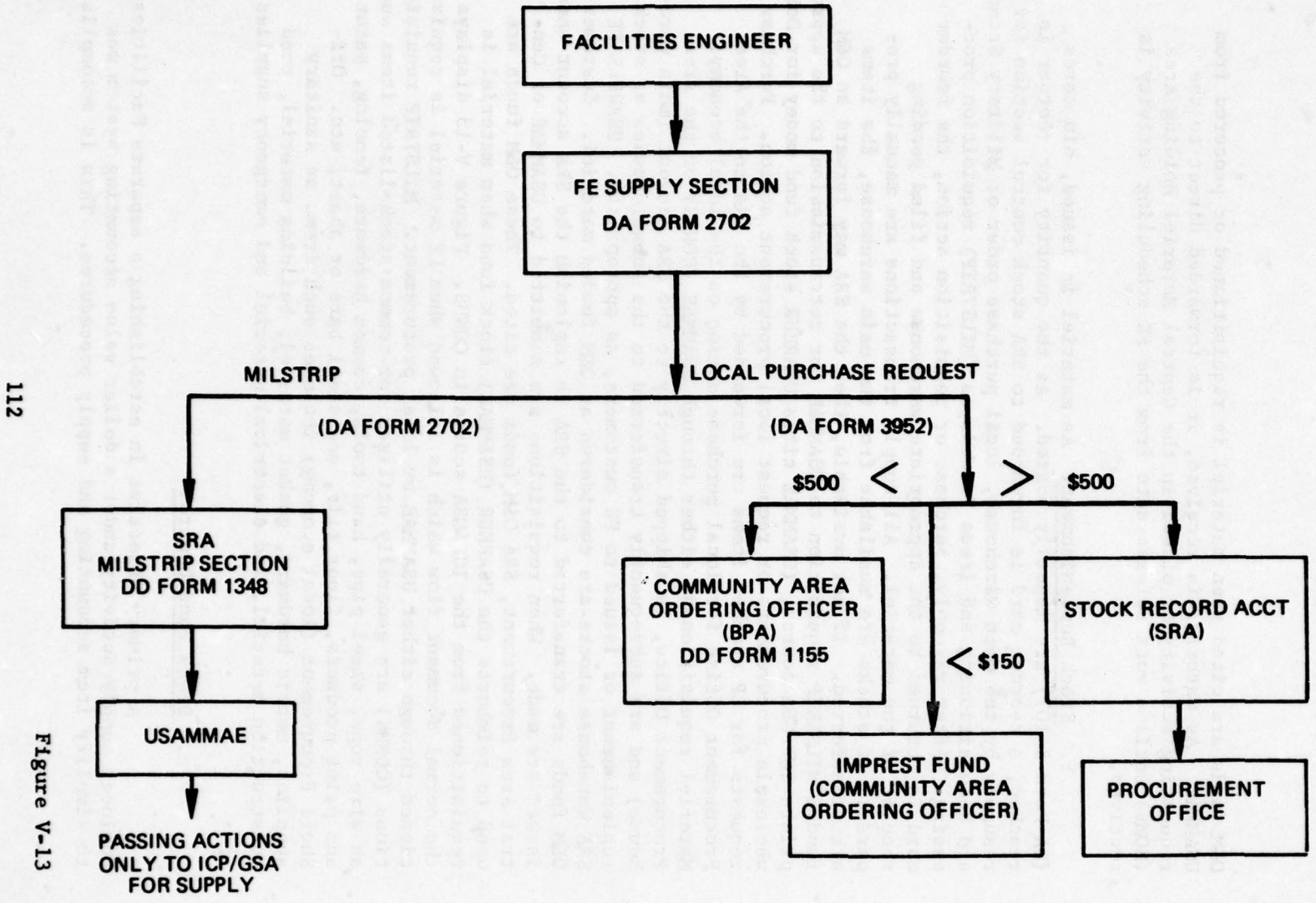



Figure V-13

through a financial general ledger accounting system where line item accounting is not maintained, and where FE stock inventories are financed by the Army stock fund with reimbursement to the stock funds from customer Operations and Maintenance (O&M) appropriations. Financial transactions are based on a manual accounting operation through the FE Self Service Store with summary sales information data furnished periodically to the Finance and Accounting Office for posting to accounting records.

Accountability of FE expendable items is on a dollar value rather than an item basis. All receipts taken into the FE account and all issues made for FE materiel issued from the Self Service Store are eventually "washed" through the Army Stock Fund. Where inventories in the FE Self Service Store are financed by Army O&M funds, the issue of supplies are made to authorized customers according to the activity codes contained on the authorizing work order (Individual Job Order/Standing Operation Order and/or Service Order). These O&M funds are eventually transferred to USAMMAE where they are used to reimburse the USAREUR stock fund for procurement of ICP/GSA materiel. In return, USAMMAE will periodically transfer additional allotments of O&M funds (usually on a quarterly cycle) to FE organizations to procure additional items based on projected requirements. Figure V-14 provides a general overview of transfer and reimbursement procedures between funds within USAREUR.

d. Supply Issues. Generally, in both CONUS and overseas areas the FE supply operation is operated under Self Service Supply Store concept. All stocks in support of the FE RPMA mission are stored/stocked within a central outlet facility (Self Service Store) located within the FE maintenance complex either at a main warehouse or subwarehouse. Line item accounting is not maintained for materiel on hand so that all adjustments to the inventory are under a dollar value accounting system. Each Self Service Store outlet is a manual accounting operation where stocks are arranged so that physical selection of items for approved work orders can be made by designated shop maintenance personnel. Layout of stocks is such that substitution of items can be visually made if the principle item(s) are not available. Bin and warehouse locator cards, with part numbers annotated thereon, are the primary means for identifying materiel, other than GSA stocked materiel, carried in the account. As materiel is received from various supply sources, it is identified and stocked by bin/locator number and made available for self service selection by FE maintenance personnel. When materiel is released by the service store, shop personnel sign an issue document indicating the dollar value amount charged and a receipt for the items. Individual bin cards are posted accordingly to maintain an accurate location of materiel. A copy of the issue

## USAREUR FE SUPPLY FUNDING PROCESS

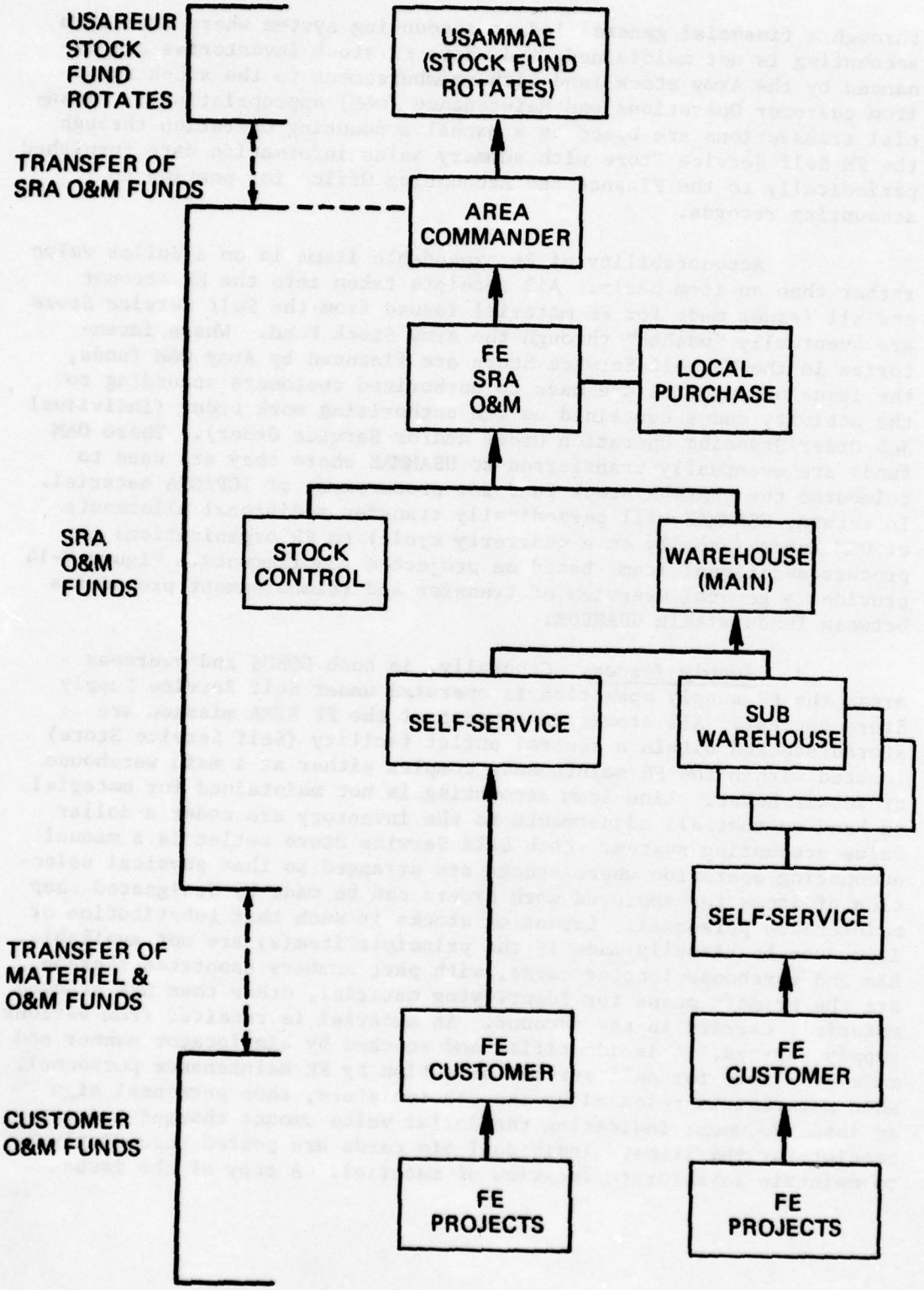



Figure V-14

document is forwarded to the installation Finance and Accounting Office for processing so that appropriate billing of O&M funds can be accomplished to reimburse the responsible FE SRA. Figure V-15 portrays the usual supply source document flow that has been established when materiel is requested by FE personnel. Materiel supply will flow in the opposite direction when materiel is available for issue.

## D. THEATER PROCUREMENT ORGANIZATION

### 1. Procurement Techniques

a. Imprest Fund actions are limited normally to $150; however, $300 per action is permitted for compelling emergencies. (Compelling emergencies require the Commanding Officer's signature.)

b. BPA Orders made by the Area Procurement Offices have a $5,000 limitation. However, BPA ordering personnel located outside of the Area Procurement Office (e.g., in the DFAE) have a $500 ordering limitation.

c. Purchase Orders have the $10,000 limitation. Delivery Orders are limited by the terms of the contract under which the order is placed.

2. Statistics. Review of actions and dollar value of DFAE materiel procurement support at Kaiserslautern and Stuttgart indicated that the techniques were used as follows:

| Techniques | % of Application |
|---|---|
| Imprest Fund | Less than 2% |
| BPA Orders | About 20% |
| Purchasing/Delivery Orders | Over 75% |

a. Review of BPAs and BPA Orders

At Kaiserslautern there were 56 active BPAs; 28 (50%) were for DFAE materiel. At Stuttgart there were 62 active BPAs; 27 (44%) were for DFAE materiel. All BPA vendors were located within 50 miles of the ordering personnel.

A review of 200 orders for DFAE items shows the following:

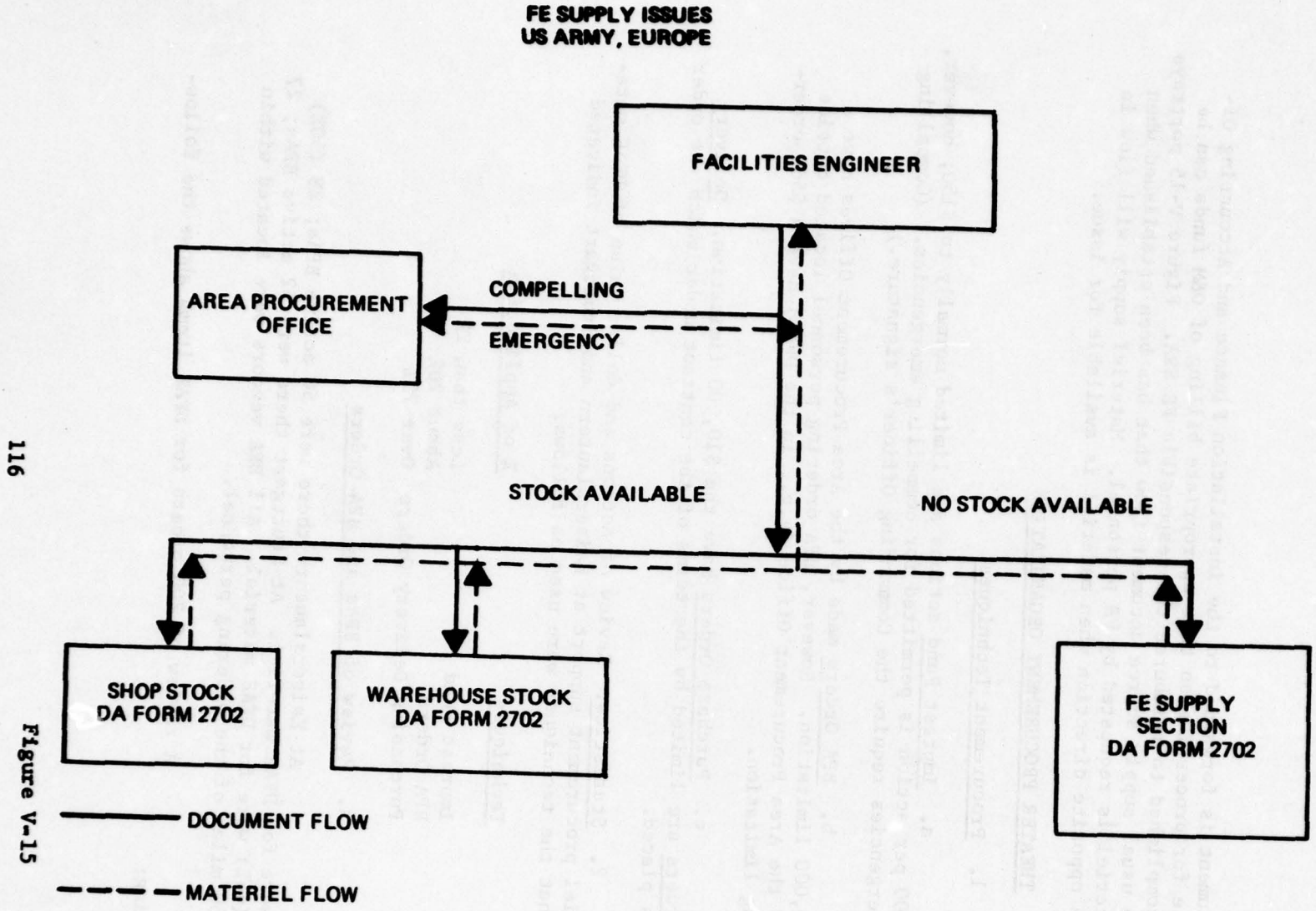

FE SUPPLY ISSUES
US ARMY, EUROPE
FACILITIES ENGINEER
AREA PROCUREMENT OFFICE
COMPELLING
EMERGENCY
STOCK AVAILABLE
NO STOCK AVAILABLE
SHOP STOCK DA FORM 2702
WAREHOUSE STOCK DA FORM 2702
FE SUPPLY SECTION DA FORM 2702
DOCUMENT FLOW
MATERIEL FLOW

Figure V-15

| Number of Line Items per Action | Number of Actions | | | Percent |
|---|---|---|---|---|
| | Kaiserslautern | Stuttgart | Total | |
| 1 | 32 | 38 | 70 | 35.0 |
| 2 | 9 | 27 | 36 | 18.0 |
| 3 | 10 | 16 | 26 | 13.0 |
| 4 | 6 | 7 | 13 | 6.5 |
| Over 4 | 43 | 12 | 55 | 27.5 |
| Total | 100 | 100 | 200 | 100.0 |

| Delivery Time (days) | Number of Actions | | | Percent |
|---|---|---|---|---|
| | Kaiserslautern | Stuttgart | Total | |
| 1 | 0 | 13 | 13 | 6.5 |
| 2 | 0 | 1 | 1 | 0.5 |
| 3 | 0 | 3 | 3 | 1.5 |
| 4 | 0 | 5 | 5 | 2.5 |
| 5-10 | 13* | 21 | 34 | 17.0 |
| Over 10 | 87* | 57 | 144 | 72.0# |
| Total | 100 | 100 | 200 | 100.0 |

* The relatively longer delivery times for Kaiserslautern are attributed, primarily to two factors: (1) nearly all BPA orders have a "confirming order" typed and mailed to the vendor and (2) very few (estimated at 1%) of the items are picked up.

\# Twenty line items (10%) were received more than 30 days after the order date; approximately the same percentage at each location. This indicates that about 10% of the items were difficult to obtain. The long, over 30 days, delivery time items could not be isolated by type or class; they included electrical, plumbing and heating, general construction, and hardware items.

b. Review of Purchase/Delivery Orders. POs/DOs account for the vast majority of materiel purchases for the DFAE. A review of 80 orders for DFAE items shows the following:

| Number of Line Items per Order | Number of Orders | | | Percent |
|---|---|---|---|---|
| | Kaiserslautern | Stuttgart | Total | |
| 1 | 15 | 13 | 28 | 35.0 |
| 2 | 8 | 8 | 16 | 20.0 |
| 3-5 | 7 | 10 | 17 | 21.3 |
| 6-10 | 4 | 6 | 10 | 12.5 |
| Over 10 | 6* | 3# | 9 | 11.2 |
| Total | 40 | 40 | 80 | 100.0 |

* Most was 18.
\# Most was 41.

| Number of Days Order to Delivery | Number of Items Kaiserslautern | Stuttgart | Total | Percent |
|---|---|---|---|---|
| 10 or less | 0* | 5 | 5 | 6.2 |
| 11-20 | 4 | 15 | 19 | 23.8 |
| 21-30 | 10 | 5 | 15 | 18.8 |
| 31-45 | 12 | 11 | 23 | 28.8 |
| 46-60 | 4 | 3 | 7 | 8.7 |
| 61-90 | 0 | 1 | 1 | 1.2 |
| over 90 | 10* | 0 | 10 | 12.5 |
| Total | 40 | 40 | 80 | 100.0 |

* Longer delivery times associated, primarily with greater degree of controls, as with BPA orders.

| Distance to Vendors (miles) | Number of Orders Kaiserslautern | Stuttgart | Total | Percent |
|---|---|---|---|---|
| less than 50 | 21 | 25 | 46 | 57.5 |
| 50 to 100 | 10 | 5 | 15 | 18.7 |
| over 100 | 9 | 10 | 19* | 23.8 |
| Total | 40 | 40 | 80 | 100.0 |

* Most of the orders from vendors outside of a 100 mile radius are orders under centrally let IDTCs.

Quantities orders on POs/DOs ranged from one to over 1,000.

Unit Prices ranged from less than $1.00 to over $1,000.

Order Values ranged from about $50 to about $10,000; two Delivery Orders exceeded $10,000.

Thirty of eighty orders were for stock replenishments. Review of stock replenishment orders at Stuttgart showed that 80% of the Delivery Orders were for stock, while 20% of the Purchase Orders were for stock. At Kaiserslautern, a review of 20 Delivery Orders showed that 100% were for stock. A further review showed that the vast majority of stock replenishment Delivery Orders were under the USAPAE IDTCs, indicating extensive use of the centrally let IDTCs by both Area Procurement Offices. (This is also a reflection of extensive use of the FESAE catalog as a means for identifying DFAE materiel requirements.) As in CONUS, the range of items ordered by the procurement offices for the DFAE is extremely broad, including electrical, floor covering, hardware, plumbing and heating, wood products, paint, building materiel, and repair parts.

E. INDIVIDUAL ITEM RESEARCH - BOMs

Samples of ten oldest valid work orders which were being held up pending materiel availability at Stuttgart revealed the following: (Similar data requested from Kaiserslautern and Frankfurt but not received.)

1. LJO 12-924-74 was for installation of vault door in Communications Security. MILSTRIP requisition was submitted for one each with a unit cost of $600 and an RDD of July 1974. Currently using a troop constructed door until security vault door is received. However, this does not meet security requirements. No delivery status was provided.

2. LJO 12-1026-74 was for repair of boiler tank, valves and sewer lines (German make). Five items were required with a price range from $25 to $350 each. Order was submitted 3rd quarter 1974 through Area Procurement Agency for delivery by 3rd quarter 1976. Reordered through local purchase January 1976. Items are required for normal repair and maintenance project.

3. LJO 12-1464-74 was for replacement of damaged outside light fixtures. Two line items with a quantity of 12 ea @ $72.00 and 7 ea @ $3.64 were required. The order was submitted during 2nd quarter 1974 and was required by January 1976. Materiel was reordered through BPA local purchase in December 1975. Work order will be completed when materiel is delivered.

4. LJO 12-1533-74 was for repair of flooring materiel in Base Gym. Only one item was required with a unit price of $24. The order was submitted 2nd quarter 1975 and required by December 1975. BPA local purchase processed January 1976. Job will be completed when materiel is delivered. No priority was established.

5. LJO A2-1932-74 was for replacement of Service Club exterior door and Special Accoustic tile (German manufacture). Two items are required, i.e., door price $400, tile price (90 ea) $720. Local purchase requested during January 1974 for delivery by 3rd quarter 1976. FE is unable to complete job due to lack of materiel.

6. LJO A2-2026-74 was to install a door between a boiler room and fuel oil storage area. (Repair and maintenance project brought forward due to shortages of materiel.) Only one item was required with a cost of $89. BPA local purchase requested during October 1975 for delivery in January 1976.

7. LJO 12-2329-74 was for repair of a linoleum floor in Teen Center. One line item required with a cost of $640. Materiel was ordered April 1974 for delivery during December 1975 through local procurement center and as a low priority as it does not affect mission requirements.

8. LJO A2-2348-74 was to replace 70 ea pole headpiece lamps. Only one line item (70 each) required with a cost of $4,270. Item ordered through local procurement during September 1975 for delivery during January 1976. The FE is unable to complete project pending receipt of lamps. This LJO affects secuirty and safety of residents in Dependent Housing Area.

9. LJO A2-430-75 was to replace steel door in communications repair facility. The door was ordered September 1975 through BPA local purchase at cost of $325, for delivery during September 1976. Area security is considered as temporarily maintained, but the door is required to insure adequacy.

10. LJO A2-511-75 was for repair of a cement floor in a Motor Pool facility. Two items were required: sand ($385) and Ready Mix ($168). The items were ordered through local procurement on 3 March 1975 for delivery during 3rd quarter 1976. The LJO was delayed due to other priority work.

## CHAPTER VI

## U.S. ARMY GARRISON, OKINAWA

### A. MANAGEMENT DATA

1. Introduction. The primary functions of the U.S. Army Garrison, Okinawa (USAGO) are:

a. Local security of U.S. personnel and facilities.

b. Stockage and maintenance of Army War Reserves and Operational Project Stocks.

c. Operation of an ammunition depot.

d. Provision of logistics, supply, and services support for all Army Forces on Okinawa, including such areas as port operation; providing postal, mortuary, and laundry services; and operation of dependent and transient housing.

e. Provision of support to other U.S. Military Forces on Okinawa in such areas as cargo handling; common user land transportation, mortuary; and laundry and dry cleaning.

Table VI-1 reflects the USAGO manning as of 30 June 1975. USAGO is organized as shown in Figure VI-1.

TABLE VI-1

USAGO AUTHORIZED MANPOWER

| | |
|---|---|
| Officers & Warrants | 151 |
| EM | 1,156 |
| DAC | 620 |
| Local/3rd country nationals | 6,496 |
| Total | 8,423 |

Source: Field Research.

U.S. ARMY GARRISON, OKINAWA

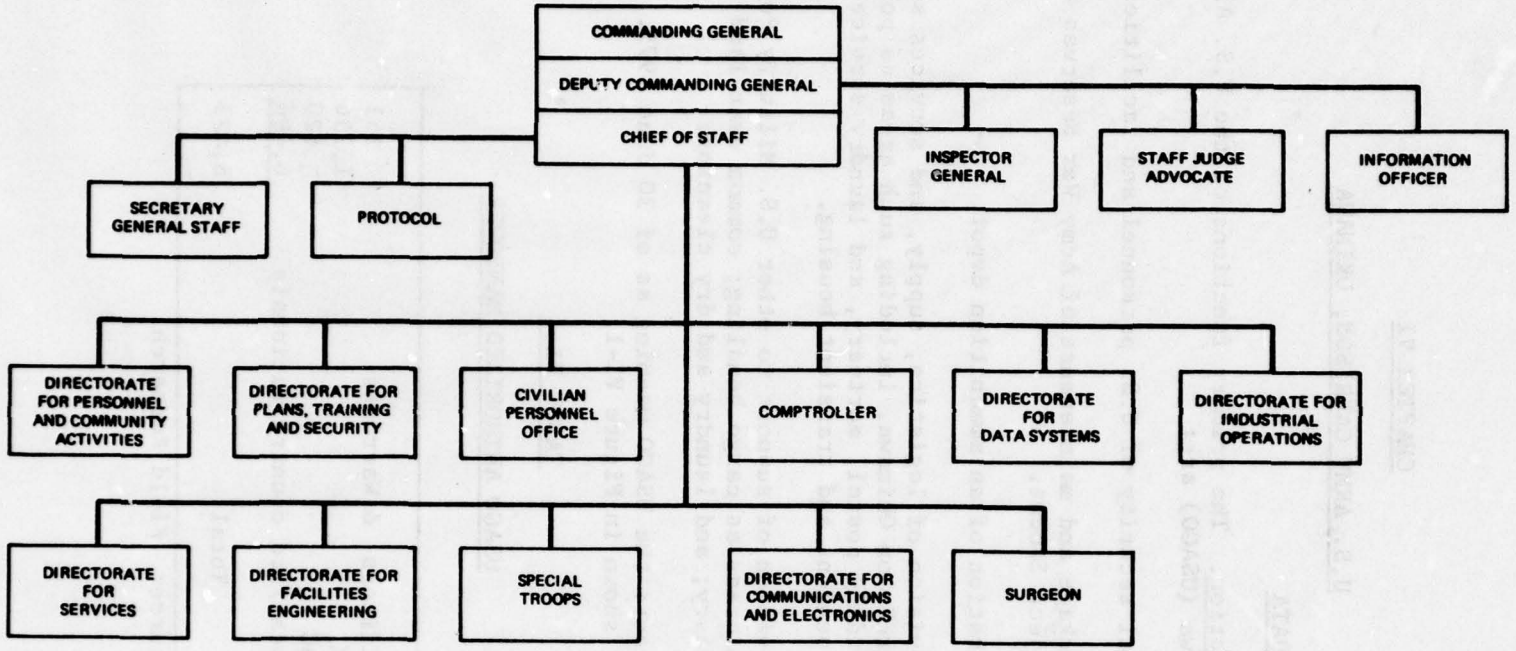



Figure VI-1

## 2. Facilities Engineer (FE) Organization

The Facilities Engineer function within USAGO is accomplished by the Directorate for Facilities Engineering (DFE). The mission of the DFE is:

a. Maintenance and repair of real property;

b. Alteration and new construction;

c. Facilities engineer support to all Army units; and

d. Management of Army real estate.

The DFE is organized as shown in Figure VI-2. Primary functions of the major organizational elements of the DFE are as follows:

a. Financial Management Division: Performs programming and budgeting functions, prepares billings, and does cost accounting.

b. Work Coordinating Office: Supervises planning, estimating, scheduling, and evaluation of alteration, maintenance, and repair work; develop long range work plans; forecast labor, equipment, and materiel requirements for Individual Job Orders (IJOs), Standing Operating Orders (SOOs), and Service Orders.

c. Installation Management Office: Operates real estate acquisition, management, utilization, and disposal programs.

d. Engineering Plans and Real Property Office: Accomplishes design, contract administration, and real property accountability functions.

e. Supply and Storage Division: Requisitions stores, and issues supplies used by the DFE; responsible for property accountability functions.

f. Building and Grounds Division: Maintenance, repair, and new construction of buildings, road, piers, and grounds.

g. Utilities and Pollution Control Division: Maintenance, repair and installation of electrical and mechanical systems, and of sewer and water systems; provision of emergency power; and operation of water plant.

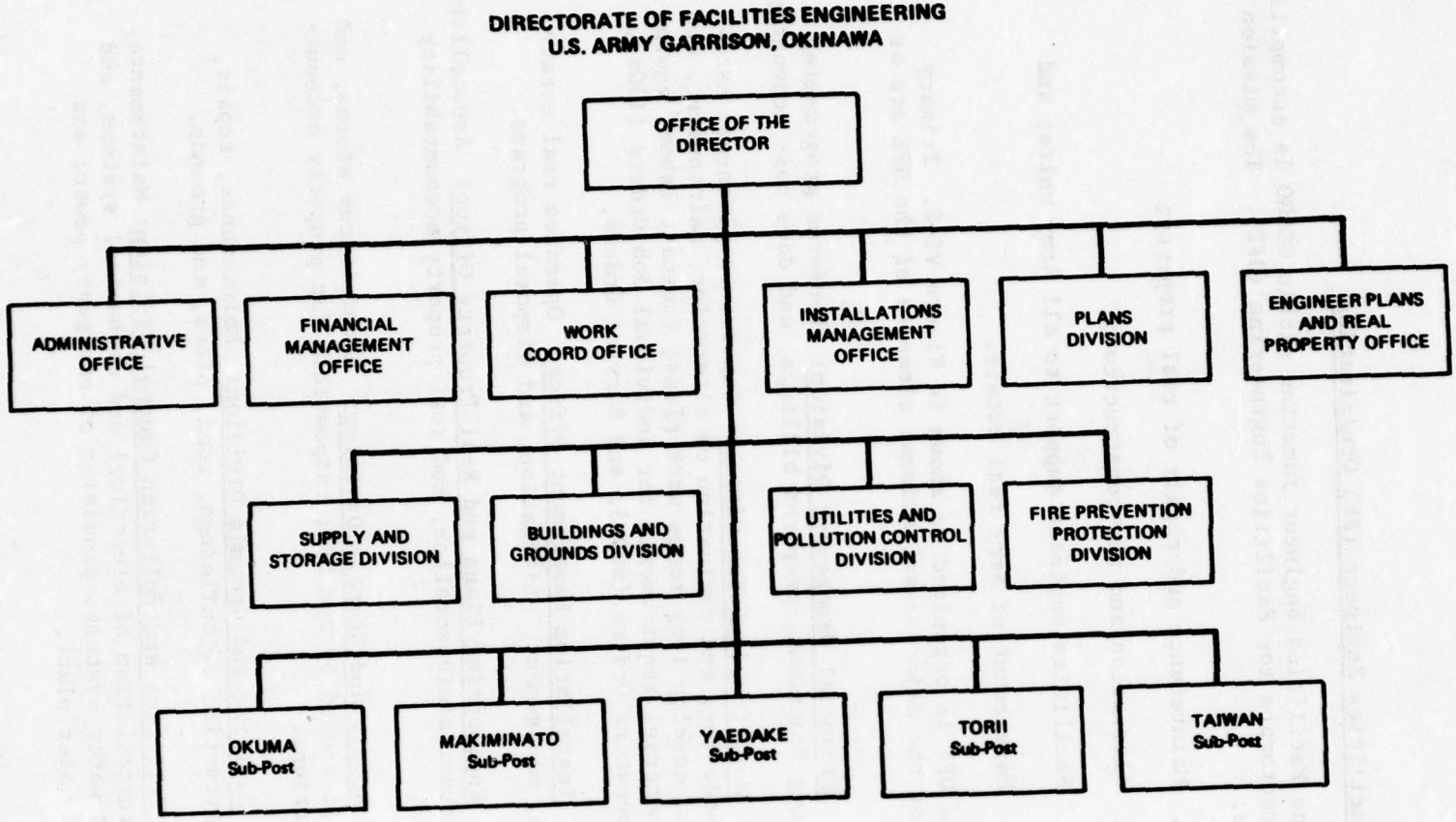

DIRECTORATE OF FACILITIES ENGINEERING
U.S. ARMY GARRISON, OKINAWA
OFFICE OF THE DIRECTOR
ADMINISTRATIVE OFFICE
FINANCIAL MANAGEMENT OFFICE
WORK COORD OFFICE
INSTALLATIONS MANAGEMENT OFFICE
PLANS DIVISION
ENGINEER PLANS AND REAL PROPERTY OFFICE
SUPPLY AND STORAGE DIVISION
BUILDINGS AND GROUNDS DIVISION
UTILITIES AND POLLUTION CONTROL DIVISION
FIRE PREVENTION PROTECTION DIVISION
OKUMA Sub-Post
MAKIMINATO Sub-Post
YAEDAKE Sub-Post
TORII Sub-Post
TAIWAN Sub-Post

Figure VI-2

h. Fire Prevention and Protection Division. Fire protection and prevention programs.

i. Plans Division. Construction programming and master planning.

3. Facilities Engineer Supply

The DFE organization at USAGO contains its own supply capability in the Supply and Storage Division. This Division is organized as shown in Figure VI-3.

The Stock Control Branch is responsible for requisitioning and accounting for materiel, and preparing purchase requests for materiel to be locally procured for the DFE by the Air Force.

The Storage Branch is responsible for the receipt, storage, and issue of supplies.

The manpower authorizations for the Supply and Storage Division are shown in Table VI-2.

Table VI-2

DFE AUTHORIZED MANPOWER

| | Military | DAC | LN | FN | Total |
|---|---|---|---|---|---|
| Office of the Director | 3 | 2 | - | - | 5 |
| Administration Office | - | 3 | 7 | - | 10 |
| Financial Management Office | - | 4 | 6 | - | 10 |
| Work Coordinating Office | 4 | 5 | 24 | - | 33 |
| Installation Management Office | - | 4 | 4 | - | 8 |
| Engineering Plans & Real Property Office | - | 9 | 41 | - | 50 |
| Supply and Storage Division | - | 5 | 38 | - | 43 |
| Buildings & Grounds Division | 2 | 16 | 263 | - | 281 |
| Utilities and Pollution Control | - | 20 | 303 | - | 323 |
| Fire Prevention and Protection Division | - | 2 | 73 | - | 75 |
| Plans Division | 1 | 3 | 1 | - | 5 |
| Sub-Posts | - | 10 | 79 | 10 | 99 |
| Total | 10 | 83 | 839 | 10 | 942 |

Source: Field Research

FE SUPPLY ORGANIZATION
U.S. ARMY GARRISON OKINAWA

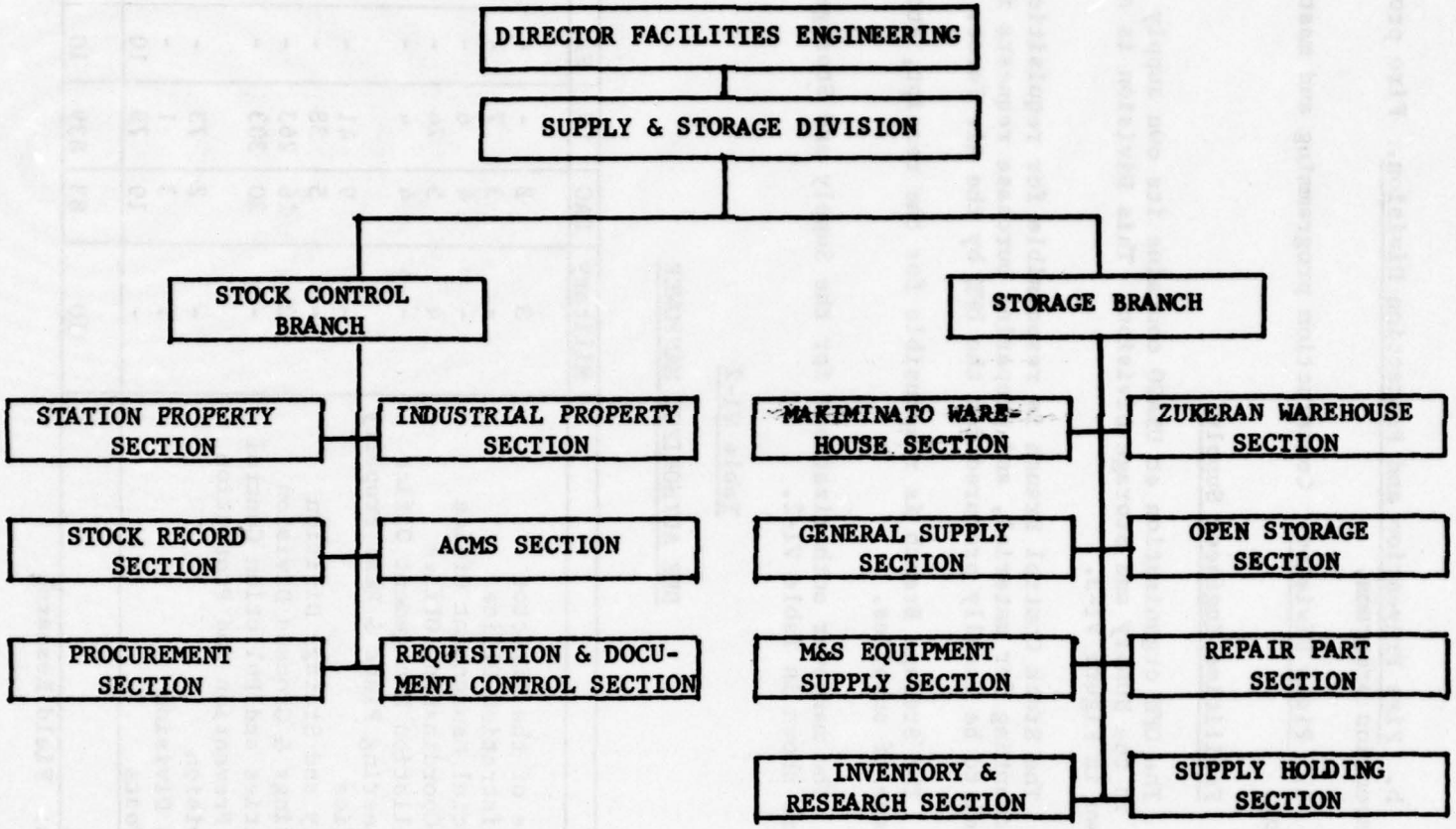



Figure VI-3

4. USAGO Supply. The Supply Division within the Directorate for Industrial Operations, is responsible for providing supply support to USAGO and attached units. As such, it represents one of the sources from which the DFE obtains his required materiel. The Supply Division is organized as shown in Figure VI-4 with the authorized manning shown in Table VI-3.

5. USAGO Procurement Support

a. Introduction. Prior to 1 July 1975, local purchases were made by the FE Supply Section directly with commercial vendors on Okinawa. The volume of local purchase expenditures for Fiscal Year 1974 and Fiscal Year 1975 were $196,355 and $301,979, respectively. These amounts represented 12.5% and 15.6% of the total supply expenditures in Fiscal Years 1974 and 1975. After 1 July, procurement responsibilities for the Army were assumed by the Air Force making all purchases subject to Air Force procedures for Kadena Air Base. In the first 3 months of Fiscal Year 1976, $15,066 was locally purchased by the Air Force procurement function in behalf of the USAGO Facilities Engineer. This amount represents 6.9% of the total supply expenditures in the first three months of Fiscal Year 1976.

b. Organization. The Procurement Section is currently a part of the Stock Control Branch, Supply and Storage Division as shown in Figure VI-4.

6. Basic Supply Statistics

| | | |
|---|---|---|
| Line Items | | |
| DIO | | 13,325 |
| DFE | estimated | 14,000-16,000 |
| Annual Demand, Fiscal Year 1975 | | |
| DIO | | $63 million |
| DFE | | 1.9 million |
| Inventory Value, 30 June 1975 | | |
| DIO | | $139 million |
| DFE | | 2.5 million |

7. Supply Operating Costs (payroll costs only)

| | |
|---|---|
| DIO | $17.5 million |
| DFE | .55 million |

SUPPLY DIVISION
U.S. ARMY GARRISON OKINAWA
DIRECTOR FOR INDUSTRIAL OPERATIONS
CHIEF
ADMINISTRATION OFFICE
OPERATIONAL PROJECTS/ PREPOSITIONED WAR RESERVE BRANCH
INSTALLATION SUPPLY BRANCH
COMMISSARY BRANCH
SUBSISTANCE BRANCH
STORE MANAGEMENT OFFICE
PETROLEUM STORAGE AND DISTRIBUTION BRANCH
MARINE EQUIPMENT CONTROL BRANCH

Figure VI-4

Table VI-3

AUTHORIZED MANPOWER FOR SUPPLY DIVISION
U.S. ARMY GARRISON OKINAWA

| | |
|---|---|
| Officers and Warrants | 5 |
| Enlisted | 157 |
| DA Civilians | 121 |
| Local & 3rd Country Nationals | 2,083 |
| Total | 2,366 |

Source: Field Research

B. FACILITIES ENGINEER DATA

1. Functions and Operations

a. Types of Work. USAGO FE work is generally as follows:

(1) Service Orders (SOs) - These consist of minor work of a maintenance and service nature which do not require more than 16 man-hours and do not cost more than $350.

(2) Standing Operations Orders (SOOs) - The work is of a repetitive nature, i.e., annual maintenance of air-conditioning and warm air furnaces; operation of water plants and cold storage plants; and provision of entomology services and fire prevention and protection. The work locations are known in advance.

(3) Individual Job Orders IJOs) - These consist of requests submitted by customers for repairs and/or new work to be done by FE personnel. IJOs are above the scope of SOs and are not repetitive work. IJOs usually require a Bill of Materials (BOM).

b. Work Generation. Work is planned on a long range (5 Year Plan) and an annual basis (Annual Work Plan). Work that is determined to be an emergency or is of high command interest is given priority attention. Family housing work is frequently scheduled above the usual IJO for accomplishment. Work that comprises SOs, SOOs, and IJOs generates as follows:

(1) SOs - The work order clerk receives telephone or written requests. Work requested is reviewed for necessity, propriety, and urgency. A Service Order is prepared and copies are distributed for use in work scheduling, materiel coordination, and work accomplishment. Emergency requirements are immediately transmitted to the respective shop.

(2) SOOs - Draft of the work to be performed is made on a Work Order by the respective division chiefs. Draft is reviewed by Work Coordinating Division and forwarded to the Facilities Engineer for approval. Upon approval, the draft is prepared as a final and is distributed for use in work scheduling, materiel coordination, and work accomplishment.

(3) IJOs - The customer submits Job Order Request to Facilities Engineering which describes the work to be accomplished. Requests are separated according to priority in the Work Coordinating Division. Requests are forwarded to the Work Reception Branch where an identification number is assigned, the Work Order is prepared, and the IJO is logged to the Estimating Branch. Estimators review the work to be done, determine materiels which will be required, and prepare necessary sketches. Engineering is consulted when services from that branch are required. When the IJO is approved and it is determined whether the work will be done in-house or by contract, copies of the work order are distributed as follows: one copy to Scheduling, Materiel Coordinating and Analysis Branch, one copy to Budget and Statistical Branch, one copy to Data Processing, and one copy is retained in the uncompleted job order file. The materiels required are ordered and, when received, the job is scheduled for accomplishment. When the job is completed the work order is returned to the Work Coordinating Division. The foreman responsible signs the reverse of the work order and annotates the date the job was completed. It is estimated that over 300 IJOs are received per month.

c. Scheduling

Scheduling of work, particularly IJOs, is dependent on man-hours and materiels available. Man-hours for overhead (supervision, leave, training, etc.), service order jobs and standing operations are subtracted from the total available man-hours.

Example:

| Personnel | | Hours per Week | | Total Hours |
|---|---|---|---|---|
| 100 | X | 40 | = | 4,000 |
| Overhead | | 1,000 hours | | |
| SOs | | 390 hours | | |
| SOOs | | 1,100 hours | = | 2,500 |
| Hours available for IJOs | | | = | 1,500 |

Overall data furnished to the Study Team showed that, during a typical month, about 65,000 man-hours, worth about $400,000 becomes available at the shop level. This effort is distributed among the types of work as follows:

| | % | Man-hours | $ Value |
|---|---|---|---|
| Standing Operations | 37% | 24,050 | $148,000 |
| Minor Repair and Maintenance (using Service Orders) | 13% | 8,450 | 52,000 |
| Individual Job Orders | 50% | 32,500 | 200,000 |
| Total | 100% | 65,000 | $400,000 |

Data for the month of September 1975, indicated a total availability of about 117,400 man-hours, including overhead, with an estimated total value of about $725,000. This effort was distributed as follows:

| | Man-hours | $ Value | % |
|---|---|---|---|
| Overhead | 33,224 | $205,175 | 28.3% |
| Standing Operations | 46,374 | 286,375 | 39.5% |
| Service Orders | 17,140 | 105,850 | 14.6% |
| Individual Job Orders | 20,662 | 127,600 | 17.6% |
| Total | 117,400 | $725,000 | 100.0% |

The remaining balance of man-hours is utilized to perform IJOs which have been selected at the weekly scheduling meeting. IJOs are selected based upon priority and availability of materiels. Materiels for IJOs are accumulated in a holding area when received from orders placed to satisfy a BOM. IJOs for which sufficient materiels are not available normally are not scheduled for accomplishment.

d. Rescheduling. No statistics were available regarding rescheduling of work and/or man-hour costs due to materiel shortages, although it was concluded that this situation did occasionally occur. IJOs that could not be accomplished as planned are rescheduled for a later period. Man-hours that generate because of rescheduling are diverted to another job.

e. Table VI-4 highlights are the Fiscal Year 1975 FE expenditures.

TABLE VI-4

FE EXPENDITURES
U.S. ARMY GARRISON OKINAWA

| | $ Value | Percent |
|---|---|---|
| Expenditures for FY 1975 | $27,498,891 | 100.0% |
| Operation of Utilities | ( 8,317,082) | ( 30.3) |
| Maintenance of Real Property | ( 11,118,856) | ( 40.4) |
| Minor Construction | ( 1,286,725) | ( 4.7) |
| Other Engineering Support | ( 6,776,228) | ( 24.6) |
| Value of Supply Expenditures for FY 1975 | $ 2,370,590 | 100.0% |
| Operation of Utilities | ( 676,822) | ( 28.6 ) |
| Maintenance of Real Property | ( 1,196,919) | ( 50.5 ) |
| Minor Construction | ( 237,381) | ( 10.0 ) |
| Other Engineering Support | ( 259,468) | ( 10.9 ) |

Source: Field Research.

f. Workload. During Fiscal Year 1975, 1,739 IJOs were completed. Of this total 857 were considered as major and the remaining 882 were minor IJOs. No precise definition was available to enable distinction between major and minor IJOs.

2. Supply Support. Sources of supply support to the Facilities Engineer are as follows:

a. Stock Record Account (SRA). The Facilities Engineer has a Supply and Storage Division as a part of his organization which operates a stock record account. The FE account is Operations and Maintenance (O&M) funded rather than stock funded. The FE requisitions stock numbered items from the Supply Division of the USAGO Directorate for Industrial Operations. Items identified as GSA-managed are ordered directly from that source. Local purchase is the source for materiels not available from the supply system. Supplies consumed during Fiscal Year 1975 had a value of $2,370,590, compared to a budget estimated for Fiscal Year 1976 of $1,400,000.

b. Bills of Materials (BOMs). Materiels for IJOs (major and minor) are ordered from the supply system by the Materiel Coordinating Branch. When the items ordered are received, they are placed in the holding area and designated as "frozen" for the specific job order. Follow-ups are made on an informal basis monthly, and, on a formal basis, every 90 days.

c. Shop Stocks. Shop stocks are utilized to a limited degree. No information was available as to number of line items or dollar value involved.

d. Excess Supplies. Materiels frozen for a job and not consumed are returned to the stock record account as unfrozen and made available for use with another job.

3. BOMs for IJOs. Materiels for IJOs are held in a segregated warehouse as "frozen" until scheduling advises that the job is to begin. As of 30 October 1975 status of BOMs and IJOs was as follows:

a. IJOs awaiting scheduling - BOM filled.

| | | | |
|---|---|---|---|
| (1) | Number of IJOs | - | 180 |
| (2) | Value of Materiel | - | $126,400 |
| (3) | Man-hours required | - | 39,800 |
| (4) | Value of man-hours | - | $172,000 |

b. IJOs awaiting materials.

| | | | |
|---|---|---|---|
| (1) | Number of IJOs | - | 69 |
| (2) | Value of materiel | - | $ 98,639 |
| (3) | Man-hours required | - | 23,434 |
| (4) | Value of man-hours | - | $133,903 |

c. IJOs in estimating and planning - more than 400.

C. SUPPLY SUPPORT

1. Supply Sources

Materiel required by the USAGO facilities engineer is provided by the DFE Supply and Storage Division. Materiel is available to craftsmen from three sources:

a. Bench stock;

b. The warehouse issue point; and,

c. The frozen area established for the support of Individual Job Orders.

Stocks under the control of DFE have been bought out of the stock fund, and are O&M funded.

2. Bench Stock. Bench stocks are established in the various craft shops of DFE as an informal arrangement with the Supply and Storage Division. No formal levels of these items are established, although these are generally expected to be two weeks consumption requirements. There is no formal, planned stock replenishment process.

3. Issue Point

The Storage Branch of the Supply and Storage Division stocks an estimated 14,000 to 16,000 items in support of the DFE, with three demands in one year serving as the basis for stockage.

Materiel is ordered by shop personnel using Request for Issue or Turn-In, and pick-up is made at the DFE warehouse location.

There is a daily walk-through of the warehouse to identify items which have reached their reorder point, since no records are kept of the stock status of items. The reorder card is pulled and forwarded to the Stock Control Branch for replenishment action. This action produces a stock level recalculation, and the reorder quantity is based on the newly-computed levels.

There is no regular system for identifying excess in Issue Point stocks, and excessing actions in the past have generally been the result of some special program or of the annual inventory.

4. Frozen Area Stocks

These are items held in support of Individual Job Orders by the Storage Branch.

Required items are identified on a "Bill of Materials", (DA Form 2702) which is received from the Work Coordinating Division. Items which are in stock are pulled by the Supply Holding Section of the Storage Branch and placed in a segregated storage area. Large items, for which such movement is impractical, are tagged in their outdoor storage area.

The BOM is marked to identify required items which are not in stock, and the bin cards for these items are sent with the BOM to the Stock Control Branch. Requisitions for these items are marked with the order number of the involved IJO, and this is in suspense at the receiving area to insure that receipts are properly routed to the "frozen area". When the last of the missing items to support a BOM has been received, the Stock Control Branch advises the Scheduling, Materiel Coordination and Analysis Branch of the Work Coordinating Office.

The workmen draw materiel from the frozen area by bringing an issue request form which lists each item on the BOM.

5. Stock Replenishment Sources

Three sources were identified for the items used by the FE:

a. "Depot"--that is, the Supply Division within the Directorate for Industrial Operations (DIO).

b. Government Services Administration (GSA).

c. Local purchase.

"Depot" items are defined as those items with National Stock Numbers (NSNs) which are listed in the Army Master Data File (AMDF). Items so identified are requisitioned by the DFE Stock Control Branch from the DIO, regardless of the source shown for the items within the AMDF. Requisitions to depot for support of BOM requirements are submitted with Issue Priority Designator (IPD) 10, while IPD 15 is used for stock replenishment requisitions submitted to depot.

Items for which an NSN cannot be identified are requisitioned from GSA Region 10; these requirements are submitted using IPD 15.

Local purchase is used to obtain bulk items (e.g., aggregate, concrete), items which must be of Japanese manufacture to be satisfactory, and any other item for which there is a critical need but which is not in stock at depot. Local purchase of items requisitioned from depot requires the approval of the DFE or the Chief of the Work Coordinating Office; although statistics were not available, but were identified as "very scarce".

Frequency of use of these sources is shown in Table VI-5.

TABLE VI-5

SUPPLY SOURCES
U.S. ARMY GARRISON OKINAWA

| | FY 1975 | | FY 76 a/o 20 Sep 1975 | |
|---|---|---|---|---|
| | Receipts ($000) | % | Receipts ($000) | % |
| Depot | $ 763.1 | 39.4% | $ 73.1 | 33.6% |
| GSA | 870.9 | 45.0 | 129.6 | 59.5 |
| Local Purchase | 302.0 | 15.6 | 15.1 | 6.9 |
| Total | $1,936.0 | 100.0% | $217.8 | 100.0% |

Source: Field Research.

## D. PROCUREMENT SUPPORT

### 1. Procurement in Support of USAGO FE

Forty-two transactions occurring in Fiscal Year 1975 (before the transfer of local purchase to the Air Force) were screened to determine the response of local vendors to orders from the FE procurement branch. This review showed that in every instance, the materiels were received the day they were ordered. Twenty-nine transactions occurring after the Air Force assumed local purchase responsibility revealed that it now takes an average of 6.79 days longer for the FE to receive materiels from the time the FE supply places orders with Air Force Procurement.

To obtain supplies from procurement, the FE shop personnel submit a DA Form 2702 (Bill of Materials) to the supply division where the screening of the requirement takes place to determine the sources from which the supplies are to be obtained. If the requirement is to be obtained from local purchase, the Procurement Section prepares a purchase request, and submits it to the FE Fund Management Division for assignment of funds for the purchase to be made. After the funds are assigned, signature approval is obtained from the Director of Services who has responsibility for making such approvals. After approval, the Purchase Request is sent to the Air Force Procurement Office which is located at Zukeran on the U.S. Marine Corps Base, S.D. Butler. At the time of this writing, the USAGO FE Supply and Storage Division is also located on U.S. Marine Corps Base, S.D. Butler. However, the FE Supply and Storage Division is in the process of moving to a new location - Makiminato Service Area - about eight miles distant. The impact of such a move on the already increased local purchase processing time could not be determined.

2. Personnel Costs for Local Purchase. Before the transfer of local purchase responsibility to the Air Force, four local national personnel were engaged in making local purchases for the FE. The grades and annual salaries of these personnel are shown in Table VI-6. The personnel costs incurred in local purchase after Air Force assumption of the procurement responsibility is shown in Table VI-7.

## E. INDIVIDUAL ITEM RESEARCH

a. Eight work orders were withheld from work scheduling because ten items of supply had not been received. Information

TABLE VI-6

FE LOCAL PURCHASE COST
U.S. ARMY GARRISON OKINAWA

| Grade | Step | Annual Salary ¥ | * Annual Salary $ |
|---|---|---|---|
| PWT-1-5 | 4 | 1,260,000 | $4,200 |
| PWT-1-4 | 10 | 1,368,000 | 4,560 |
| PWT-1-4 | 3 | 1,143,600 | 3,812 |
| PWT-1-4 | 3 | 1,143,600 | 3,812 |
| Total | | | $16,384 |

Source: Field Research.
*Annual salaries in $ computed at rate of exchange of 300 ¥ to $1.00.

TABLE VI-7

AIR FORCE LOCAL PURCHASE COST
U.S. ARMY GARRISON OKINAWA

| Grade | Step | Annual Salary ¥ | * Annual Salary $ |
|---|---|---|---|
| ** PWT-1-5 | 4 | 1,260,000 | $ 4,200 |
| ** PWT-1-4 | 10 | 1,368,000 | 4,560 |
| *** PWT-1-5 | 4 | 1,260,000 | 4,200 |
| Total | | | $12,960 |

Source: Field Research.
*Annual salaries in $ computed at rate of exchange of 300 ¥ to $1.00.
**Physically located in USAGO FE organization.
***Air Force estimate of one person full-time on procurement for USAGO FE.

gleaned from documentation of the back ordered items of supply for these work orders showed:

(1) Item was on order for 180 days without follow-up action being taken.

(2) Item was on order for 270 days with three follow-up actions having been made, and status information indicating the item was shipped.

(3) Item was reordered one year after the original order. The reorder was made on UMMIPS priority 02 and had been on order for 68 days. One follow-up was made but not status received.

(4) Item was on order for 126 days with one follow-up sent. Status received from GSA indicated the item was ordered from the manufacturer.

(5) Item was on order for 293 days. Information from GSA indicates the item was ordered from the manufacturer.

(6) Two separate requisitions for items required for the same work order had been on order for 95 days. The FE had ordered the items 162 days before they were placed on requisition. Lack of funds was the reason for not requisitioning the item sonner. One follow-up had been made to determine the status of the items. No status information had been received.

(7) Item was on order for 126 days. Status from GSA indicates the item was ordered from the manufacturer.

(8) Item was on order for 245 days. Eight follow-up actions have been taken with status from the supply source indicating the item was on backorder.

b. It should be noted that all of the above items, except one, did not have a National Stock Number. Items without an NSN are known to cause excessive delivery time because of their difficulty to procure. The long delivery time required impacts on the timely scheduling of work, and often, work orders have to be rescheduled to a later time.

## CHAPTER VII

## NAVY PUBLIC WORKS CENTER, NORFOLK

### A. MANAGEMENT DATA

#### 1. Public Works Center Organization

The Naval Public Works Center (PWC), Norfolk is one of nine in the Navy and is the largest in terms of business. The PWC operating plan for Fiscal Year 1976 will be approximately $64 million in addition to a $2.9 million corpus for the Navy Industrial Fund (NIF).

The mission of the Public Works Center Norfolk is to provide facilities engineer, utilities, housing, transportation, engineering services, and shore facilities planning support to Naval activities in the Norfolk area and the Mediterranean area. The PWC is responsible for supporting the Naval Base, Norfolk at Sewells Point and Fort Story. It also provides support, on an as-requested basis, to supplement the public works capabilities of other Naval activities in the Norfolk area (e.g., Naval Air Station Oceana, Norfolk Naval Shipyard, and Naval Weapons Station Yorktown).

The PWC is organized as shown in Figure VII-1. A total of approximately 2,000 civilians, and 15 military personnel, are authorized to the PWC.

#### 2. PWC Materiel Organization

Supply and procurement functions in support of the PWC mission are accomplished within the Material Department. The Department provides only materiel required by the PWC for the accomplishment of its mission; no materiel is obtained/provided by the Material Department for use by customers-- e.g., in "self-help" programs.

The Material Department is organized as shown in Figure VII-2. Major functions accomplished by each organizational element are as follows:

a. Material Operations Division. Is responsible for the warehousing and storage of materiel and the operation of eight shop stores (including one primarily concerned with the recordkeeping associated with fuels). One branch within this division is responsible for the support of the transportation function, while the Maintenance/Utilities Branch is responsible for supporting the facilities engineering functions of the PWC.

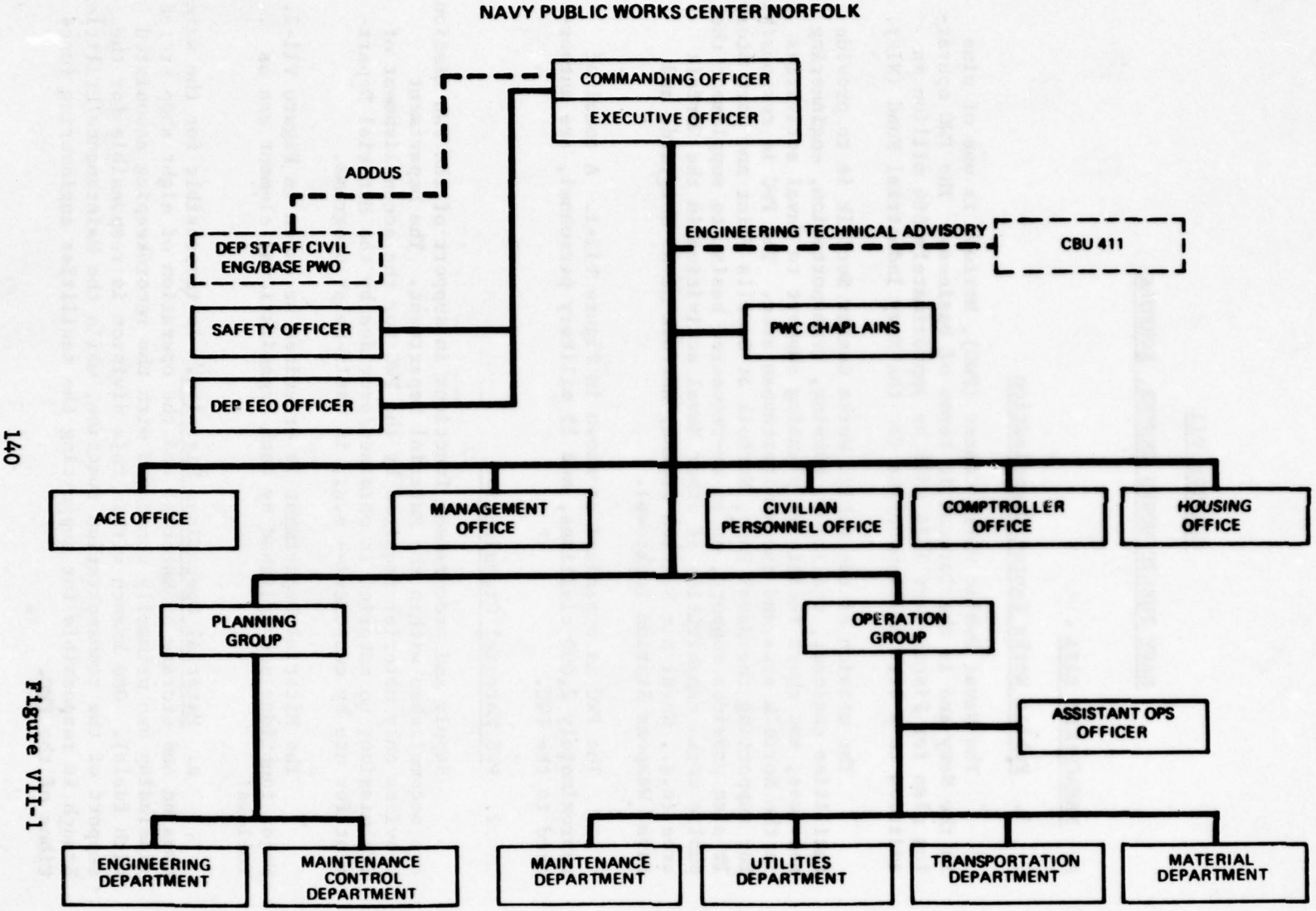

NAVY PUBLIC WORKS CENTER NORFOLK
COMMANDING OFFICER
EXECUTIVE OFFICER
ADDUS
DEP STAFF CIVIL ENG/BASE PWO
ENGINEERING TECHNICAL ADVISORY
CBU 411
SAFETY OFFICER
PWC CHAPLAINS
DEP EEO OFFICER
ACE OFFICE
MANAGEMENT OFFICE
CIVILIAN PERSONNEL OFFICE
COMPTROLLER OFFICE
HOUSING OFFICE
PLANNING GROUP
OPERATION GROUP
ASSISTANT OPS OFFICER
ENGINEERING DEPARTMENT
MAINTENANCE CONTROL DEPARTMENT
MAINTENANCE DEPARTMENT
UTILITIES DEPARTMENT
TRANSPORTATION DEPARTMENT
MATERIAL DEPARTMENT

Figure VII-1

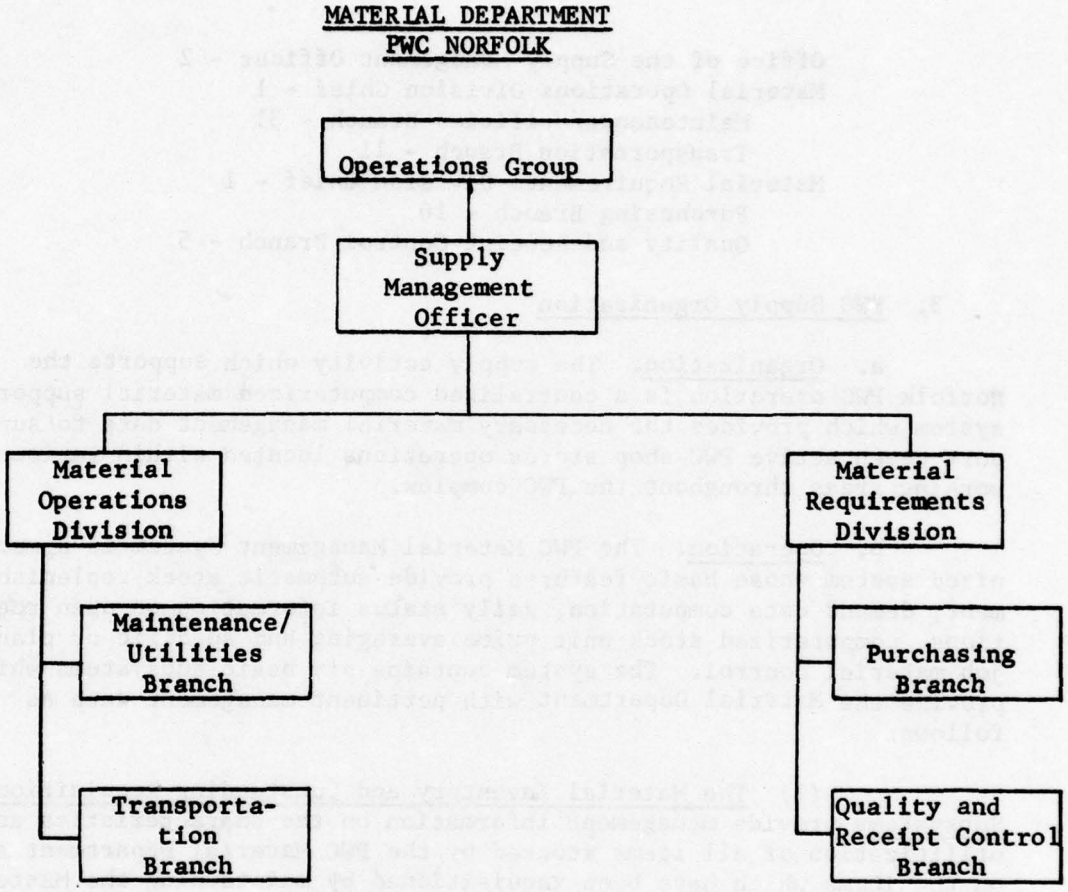



Figure VII-2

b. Material Requirements Division. Is responsible for the acquisition of all materiel required by the PWC, including that materiel which is obtained through local purchase, that which is obtained from the General Services Administration (GSA), and that which is obtained by requisition from the Naval Supply Center (NSC), Norfolk. The Purchasing Branch is responsible for the acquisition of materiel, including required document control and followup. The Quality and Receipt Control Branch controls receiving documentation.

c. Manpower Authorizations. The Material Department authoized manpower is as follows:

Office of the Supply Management Officer - 2
Material Operations Division Chief - 1
Maintenance/Utilities Branch - 31
Transportation Branch - 11
Material Requirements Division Chief - 1
Purchasing Branch - 16
Quality and Receipt Control Branch - 5

3. PWC Supply Organization

a. Organization. The supply activity which supports the Norfolk PWC operation is a centralized computerized materiel support system which provides the necessary materiel management data to support seven active PWC shop stores operations located within various working areas throughout the PWC complex.

b. Operation. The PWC Material Management System is a mechanized system whose basic features provide automatic stock replenishment, demand data computation, daily status information on open requisitions, computerized stock unit price averaging and specific or planned job materiel control. The system contains six basic subsystems which provide the Material Department with pertinent management data as follows:

(1) The Material Inventory and Outstanding Requisitions Subsystems provide management information on the characteristics and utilitization of all items stocked by the PWC Material Department and on the items which have been requisitioned by maintaining the Master Inventory File (MIF) and the Outstanding Requisition File (ORF). The MIF contains pertinent information on all items stocked in inventory and provides the system capability to (1) automatically perform stock replenishment, (2) perform an analysis of stocking levels based upon past usage and automatically adjusts item stock levels, and (3) prepares stock status reports for individual item analysis by materiel personnel. The ORF provides capability to (1) insure timely receipt of items and quantity ordered, (2) plan PWC workload based on materiel deliveries, and (3) generate automatic followup on delayed receipts.

(2) The Direct Material Inventory Subsystem maintains and updates the Direct Material Inventory (DMI) file. The DMI file represents materiel which has been requested, procured, received, and staged for a specific job, or for planned requirement to be charged

to the job order at the time of issue. It also produces a status report by job order and work center reflecting materiel requested, estimated cost, actual cost upon receipt, the materiel available or staged, and materiel issues to a specific job. For those specific jobs for which all materiel has been received a job availability report is automatically produced for scheduling purposes.

(3) The Physical Inventory Subsystem provides reports and cards for the accomplishment of physical counts for all or selected items contained in the Material Stores Inventory. After inventory comparisons, it adjusts MIF record balances to select physical counts taken.

(4) The Material Demands Subsystem provides a cumulative listing of a replenishable demands for items not carried in the PWC materiel inventory file. This listing provides information for the continuing evaluation of demands, and the basis for determining if an item should be stocked in the PWC materiel inventory.

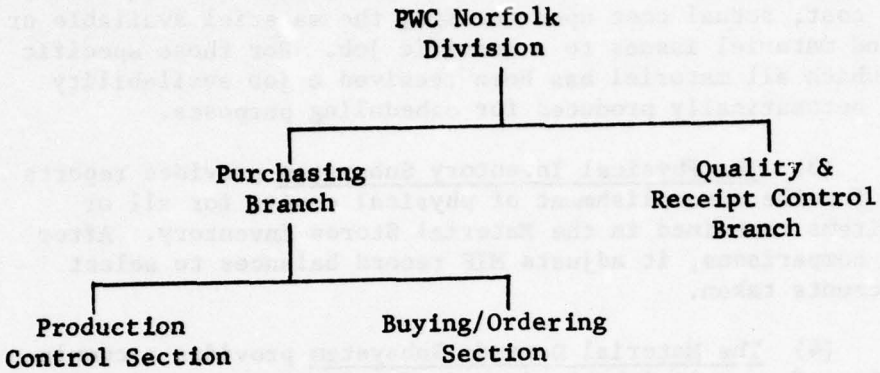
(5) The Contractor Operated Parts Store (COPARS) Subsystem. Records and lists all Contractor Operated Parts Store transactions. Provides information for verification of COPARS vendors billing and is utilized only by activities having a COPARS operation.

(6) The Material Catalog Subsystem produces complete listing of items contained in materiel inventory file. Catalogs may be procured in stock number commodity, or, by nomenclature in alphabetical sequence as desired. Nomenclature printed out is the long description contained in MIF for each stock item and is distributed to designated shop stores to expedite identification and ordering of stock for maintenance materiel requirements.

4. PWC Procurement Organization

a. Organization. Procurement support for the PWC operations is provided by the Material Requirements Division of the PWC's Material Department. The Material Requirements Division is organized and staffed as shown in Figure VII-3.

MATERIAL DEPARTMENT
REQUIREMENTS DIVISION




| Position | Authorized | On-Board |
|---|---|---|
| Division Chief, GS-2001-09 | 1 | 0 |
| Purchase Branch Chief, GS-1105-07 | 1 | 1 |
| Buying/Ordering Section, GS-1105-05 | 3 | 3 |
| GS-1105-04 | 3 | 3 |
| GS-1105-03 | 2 | 2 |
| GS-322-02 | 2 | 2 |
| Production Control Section, GS-2005-05 | 1 | 0 |
| GS-2005-04 | 3 | 3 |
| GS-2005-03 | 1 | 1 |
| Quality & Receipt Control Br, GS-2005-05 | 1 | 1 |
| GS-2005-04 | 2 | 2 |
| GS-2005-03 | 2 | 2 |
| Total | 22 | 20 |

Figure VII-3

In addition, eight Equipment Specialists (five GS-1670-07), and three GS-1670-05) located in Material Operations Division of the Material Department to assist in the procurement support function.

b. Tasks Performed

Within the overall PWC Material Support System requirements for approximately 8,400 line items are computer determined. For the line items in this range having National Stock Numbers (NSNs) and a central (e.g., GSA or DSC) supply source, requisitions are generally computer produced and transmitted directly to NSC Norfolk for processing internally or retransmittal to the materiel manager.

When it is anticipated that purchase action may be required for an item, a procurement request (in any of several formats) is forwarded to the Buying/Ordering Section of the Purchase Branch for procurement action.

Within this overall procurement process, the following tasks are performed:

(1) Materiel Identification. The eight Equipment Specialists (five for maintenance and utilities and three for transportation) located in the Material Operations Division perform materiel identification tasks including: item research, description, conversion of part numbers/reference numbers to National Stock Numbers, and identifying sources of supply.

(2) Procurement. Eight Buyers (five for maintenance and utilities and three for automotive/transportation) located in the "Purchasing" Branch of the Material Requirements Division perform materiel procurement tasks including: buying direct from commercial sources, ordering under Indefinite Delivery Type Contracts (IDTCs) prepared by other buying organizations, and submitting procurement requests to other procurement organizations. Two clerk-typists prepare contracts, purchase orders, delivery orders, invitations for bids, and procurement requests.

(3) Followup. Three supply clerks and a procurement clerk in the "Purchasing" Branch conduct followup actions on vendors, distribution depots, or Inventory Control Points (ICPs) regarding the status of materials being purchased or requisitioned.

(4) Receipt and Inspection. Receipt control tasks, including inspection to insure that materiel received is of proper quantity and quality are conducted by five supply clerks in the Quality and Receipt Control Branch of the Material Requirements Division.

5. Basic Supply Statistics

| | |
|---|---|
| Line Items approximately | 5,800 |
| (plus approximately 2,600 line items related to transportation) | |
| Annual Sales, Fiscal Year 1975 | |
| From on-hand stocks, excluding fuel, transportation | $2,031,770 |
| Direct sales to customers (DTO) | 3,732,510 |
| Sales to support specific jobs (DMI) | 2,203,268 |
| Total | $7,967,548 |

| | | |
|---|---|---|
| Inventory, as of 30 June 1975 | | |
| Shop Stores, excluding fuel, transportation | $942,489 | |
| | 740,471 | |
| DMI | $1,682,960 | |
| Total | | |

| | | |
|---|---|---|
| Central Procurement, by Source, 4th quarter, Fiscal Year 1975 | | |
| NSC Norfolk Stocks | $143,689 | 16.6% |
| DSA (PWC requisition passed by Norfolk) | 672,969 | 77.9% |
| GSA | 47,354 | 5.5% |
| Total | $864,012 | 100.0% |

B. FACILITIES ENGINEER (FE) DATA

1. Type of Work

a. Emergency Service Minor. These jobs must be done expeditiously and require about 80 man-hours of work.

b. Service Jobs. Require about 16 hours but are not an emergency.

c. Specific Jobs. Work that requires over 80 man-hours and/or involves two or more shops. Average specific job has a value of approximately $4,000.

d. Maintenance Service Agreements. Work that is done for Naval Air Stations under terms of an Intraservice type agreement.

e. Recurring Work. Preventive maintenance work which occurs on a periodic basis.

2. Scheduling. Specific jobs are those that are scheduled and receive management emphasis. Steps for specific jobs are as follows:

a. Job is scoped by a Planner/Estimator (approximately two hours).

b. Customer advised of estimate and can adjust the job if so desired.

c. Detailed plans are developed and job is described. The package contains job description, list of needed materiel, and an estimate of required man-hours (NAVFAC Form 9-11014/25 (PWC NV Rev 9/72 - Job Order)).

d. Job goes to equipment specialist for review. Equipment specialist returns job within three days. The specialist verifies stock number or indicates outside purchase (OSP) and determines commodity group (COG) number.

e. Action is started to accumulate materiel which are to be on-hand within 30 working days. When items are not received within two weeks of a job starting date other supply sources are checked, this usually is local purchase.

f. Job is scheduled. Scheduling can depend on condition other than supply, e.g., manpower, weather, and availability of the work site.

g. When job is completed request is submitted to the customer for release and subsequent processing of billing.

3. Rescheduling

Job scheduling changes because of materiel delays do not necessarily have an adverse effect on personnel. The weekly meeting regarding jobs results in a rescheduling of jobs, about 10 to 15 a month fall into this category.

Statistics for July 1975:

a. Jobs in loadplan - 248.

b. Jobs not worked because of materiel - 3.

c. Jobs with one to three days delay - 6.

d. Emergency jobs included in the program - 10.

e. Change orders resulted in 18 jobs being pulled from the plan.

Discussion indicated that over a twelve month period, 86.2% of the jobs scheduled were completed as planned.

C. PWC SUPPLY

1. General

Supply for the PWC is under the Material Department Supply Management Office. It consists of eight stores (seven in working areas and one for fuel). The Supply Management Office provides an estimated 8,419 line items (2,600 of which are for transportation).

The PWC supply uses the supply system if it can respond, and will stay with the system as long as the job is not jeopardized. The Material Department must start drawing materiel 30 days before scheduling of a job.

Inventory ceiling is maintained at ½ of the yearly sales (90 days); stockage is determined from item demand and set goals. Items without a transaction in 6 months are reviewed and if no foreseeable requirement exists they are considered to be excess. Levels are computed each month. Excess items with NSNs are reported to the NSC; items without NSNs are sent to the Property Disposal Activity. Excess disposed of in June 1975 consisted of 732 line items valued at $75,000.

Local purchase authority is limited to $2,500. Requests over that amount require a DD Form 1348-6 to be submitted to the Navy Purchasing Office at the NSC. The largest number of local purchase are made directly by the PWC.

2. Materiel Impact. Direct Material Inventory covers items accumulated for specific jobs. The items are warehoused by supply until the respective job is ready to start. A sample of six jobs revealed that approximately 33% of the materiel required are obtained from outside procurement. Jobs in sample are as follows:

Job Order 5112129, Building P1 - Construct Women's head. 102 items needed, 27 from OSP. Materiel required date 12 October.

Job Order 1316506, Refurbish Office Interior Bldg NH 23. Seventy-one items needed, 25 from OSP. Materiel required date 16 October.

Job Order 1195504, Modify Office, Bldg Z-133. Eighty-three items needed, 19 from OSP. Materiel required date 17 September.

Job Order 1315591, Repair and Improve Meredith and Fleet Road, 59 items needed, 27 from OSP. Materiel required by 29 October.

Job Order 1645751, Replace Defective Regulator and Safety Valve, seven items needed, three from OSP. Materiel required by 16 October.

Job Order 1864591, NM Magazine Area, four items needed, four from OSP. Materiel required by 23 October.

3. Emergency Supplies. Supplies for emergency service orders are acquired as follows:

a. Technician requests items from issue point.

b. Equipment specialist calls NSC. When the NSC does not have the item it is declared urgent by the equipment specialist and decision is made to go locally.

c. Condition for local purchase:

(1) Items $50 to $100 one bid is made by telephone.

(2) Items $100 to $250 two bids are made by telephone to an established Blanket Purchase Agreement (BPA).

(3) $250 to $2,500 three bids are requested.

(4) Over $2,500 requirement is forwarded to NSC.

4. Supply Sources to FE Activity. All inventories maintained on the mechanized PWC Supply Stock Record Account are distributed to and stocked by the various shop stores located throughout the PWC complex. There are no separate backup inventories maintained or stored elsewhere with the complex to support shop store stocks. To maintain an effective inventory of stock to meet customer requirements, it is Naval Facilities Engineering Command (NAVFAC) policy that store stock inventories should be turned over at least four times per annum. (Turnover rate is based on the current inventory value, minus the value of insurance items, fuel, and Direct Materiel Inventory (DMI-Holding Area), divided by the previous 12 months value of issues from stock. Fuel stock issues are not included.) Table VII-1 portrays pertinent data for FE maintenance store #5, #6, and #7. The shop stores are:

| Shop Store | Area | Type Shop |
|---|---|---|
| SS #2 | Transportation | Provide supply support for repair and maintenance of vehicles (construction type) |
| SS #4 | Transportation | |
| SS #5 | Maintenance | Fort Story RPMA support (off base) PWC Public Works Maintenance. Applicable to all shop stores. |
| SS #6 | Maintenance | |
| SS #7 | Maintenance | Mobile FE trailer/vans for Marine Corps (Special Account) |
| SS #8 | Fuels | Gasoline Service Stations, Diesel, fuel, oil, etc. |

Table VII-1

SHOP STORE SUMMARY
(August 1975)

| Level Data | Shop Store #5 | Shop Store #6 | Shop Store #7 |
|---|---|---|---|
| Total line items | 1,495 | 3,846 | 309 |
| Total value | $89,214 | $835,539 | $97,491 |
| Insurance Items* | 121 | 139 | 0 |
| Insurance Value | $3,342 | $49,617 | 0 |
| Line Items Excess | 658 | 703 | 95 |
| Line Items Value Excess | $23,503 | $153,297 | $24,617 |
| Monthly Issues | 695 | 8,580 | 196 |
| Monthly Demand | 848 | 11,650 | 336 |
| Value Monthly Issues | $7,034 | $165,763 | $4,148 |
| Prior 12 Months Issues | $107,725 | $1,783,367 | $110,320 |
| Stock Turnover Rate** | 1.25 | 2.27 | 1.13 |
| Gross Availability Data*** | 82% | 73.7% | 58.3% |

Source: Field Research

* Limited to 10% of total line items.
** Require value of turnover of 4 times per annum.
*** Standard 73%.

5. Type of Materiel and Issue Process

a. Direct Turnover Issues (DTOs). Materiel requirements for small emergency, standard, and minor (ES&M) type PWC work are obtained by the FE maintenance technicians as over-the-counter (OTC) issues direct from the Shop Store Stock. Emergency work requests are generated either by telephone or memo requests from PWC customers for emergency/immediate requirements such as broken water faucet, open toilet, broken light switches, etc. Standard jobs involve 80 hours or less of estimated maintenance man-hours and are considered as urgent, but not emergency requirements. Minor jobs are specific type jobs scheduled for accomplishment which do not exceed the 80 man-hours limitations. All materiel is obtained from the shop store "over-the-counter" issues by means of a materiel issue list which provides the item(s) direct to the maintenance technician from stock or local procurement, as necessary. Once materiel is issued, accountability for the item is assumed by the customer.

b. Insurance Items. These items do not meet the stockage criteria established for regular store stocked items but are considered essential to meet emergency services or to continue the operation of essential equipment. General criteria which govern the stockage of this item is that (1) essential to the operations of mission equipment, (2) procurement order and leadtime are such that equipment or services would cause unacceptable situations, (3) demands are so unpredictable that ordinary stockage requirements cannot predict for the purchase and delivery in time meet emergency conditions. CONUS PWC insurance stocks are not to exceed 10% of inventory; overseas PWC activity are limited to 20% of inventory.

c. Pre-Expended Bins. Consists of low cost pre-expended consumable supply items which are consumed as "in-use" during the repair and maintenance (Real Property Maintenance Activity (RPMA)) process. Examples of items carried in the pre-expended bins consist of such items as common size bolts, nuts, washers, nails, plumbing gaskets, sheet materiel packing, etc. Items are of high usage nature and are usually stocked in the immediate area of the workman where he can help himself. Items of $5.00 or less per unit are authorized for stockage and is limited to a 30-day supply. (Items of a high pilferable nature are not to be stocked in the pre-expended bins.) Range of items carried in store is originally established by agreement between the shop supervisor and the shop store personnel with stock level changes made according to usage experiences. Bins are regularly inspected and replenished by shop store personnel to insure that stock is available and that bin stocks are not mixed.

d. Direct Material Inventory. For approved customer job orders routine materiel requirements are submitted by the Maintenance Control Department (MCD) by forwarding a materiel requirement and issue document to the appropriate maintenance shop store. As a general practice, MCD attempts to schedule most PWC jobs for completion within a 4½ month time period, depending on the size of the job. As materiel for the job order arrives, it is assembled into the appropriate shop store staging area (DMI). When materiel is assembled and the job is scheduled for action, all materiel collected to support the job order is released to the PWC maintenance shop for the job requirements.

6. Authorized Stock Levels

a. Store Stocked Items. Stock levels are automatically recomputed every 30 days for each line item stocked. The stock level is a weighted figure that consists of 75% of the past 3 months usage, plus 25% of the average quarters usage based upon the 12 months history. All stocks are stored in the various shop stores pending customer usage to meet work orders, urgent, or routine maintenance requirements.

b. Insurance Items. These are negotiated levels which are established to meet emergency conditions to maintain operational equipment or unacceptable services due to long procurement leadtimes, or unpredictable requirements. Items are replaced on a one-for-one basis when issued.

7. Store Stock Replenishment. Replenishment requisition for Store Stock materiel are automatically generated when the balance on hand plus the due-in is less than the reorder point. Computations formula for the reorder quantity is the established Reorder Point plus the "percent value" of stock turns per year, minus the balance on hand, minus the due-ins. To determine the Reorder Points the following standards are normally utilized as displayed in Table VII-2.

Table VII-2

REPLENISHMENT CRITERIA

| Reorder Point Standards | | Stock Turn Values | |
|---|---|---|---|
| Leadtime and Supply Level Days | Reorder Point (% of Stock Level) | Stock Turns Per Year | Percent Value (% of stock level) |
| 20 | .22 | 4 | 1.00 |
| 30 | .34 | 6 | .75 |
| 45 | .50 | 8 | .50 |
| 60 | .67 | | |
| 90 | 1.00 | | |
| 120 | 1.34 | | |
| 150 | 1.67 | | |
| 180 | 2.00 | | |
| 255 | 2.84 | | |
| 270 | 3.00 | | |

Source: Field Research

Example: To compute the Reorder Quantity for an item with a stock level of 50, a leadtime of 45 days (.50), a desired stock turn of 8 times a year (.50), with a balance on hand of 10 and a due-in of 15, the following formula would be utilized:

Formula:

(SL x .50) + (SL x .50) - O/H - D/I = Number Units
25 + 25 - 27 = 13 Units

8. Funding. All materiel carried on the PWC Supply Stock Record Account of the Material Departments are carried under the Navy Industrial Fund Accounting System. All items requisitioned and held for use, either as Shop Stock or as DMI Materiel, is considered as NIF materiel until issued to the appropriate customer in the performance of work. As the Material Department purchases supplies from either Local Purchase, BPAs, GSA, or NSC, Naval industrial funds are spent. Reimbursement to the Material Department is accomplished when the job is completed and the customer is billed.

9. Excess. Excess items generated from DMI Work Orders are either turned into the shop store for credit or processed direct to disposal if less than $10.00 and no requirement exists. If items can be reutilized, credit is given to the customer for turn-in. If items are excess to stock level requirements, no credit is given. NSN items are reported to NSC/DSA for disposal action; non-NSN items are processed direct to disposal after established holding of 6 months. The general criteria for excessing an item from shop stock is (1) whether or not a demand has been placed against the line item in the last 6 months, and (2) whether a line item has a balance on hand greater than 150% of the stock level. Excess listings are automatically generated by the computer to determine whether or not excess items should be reported to the appropriate NSC/DSA for disposition, or processed to disposal and terminate supply responsibility.

10. Supply Sources

For Fiscal Year 1975, the Material Department PWC Norfolk provided the following data regarding different sources for obtaining materiel:

Replenishment for Stock

| | | |
|---|---|---|
| Number Replenishment Requests | 19,560 | |
| -Supply System (NSC) | 7,298 | 37.3% |
| -Local Purchase (BPA) | 6,774 | 34.6% |
| -Cannot Identify Sources | 5,488 | 28.1% |

a. Central Procurement (CP) Sources. These requisitions generally consist of standard stock numbered items which are requisitioned through automatic PWC Supply Systems direct to the Naval Supply Center or GSA for scheduled items. If not in stock at the NSC, the requisitions are passed to the ICP/GSA sources for appropriate replenishment action. After NSC passes the requisition to the ICP/GSA, all future transactions (status, followups, passing criteria, etc.) are between the ICP/GSA activity and the PWC Material Department.

b. Local Purchase (LP) Sources. NSN items which are not in stock and not carried items of a high priority requirement, and items coded Local Purchase in the National Stock List Catalogs can be purchased through BPAs, within prescribed dollar limitations as follows:

(1) LP Coded Items:

- PWC Material Department has purchasing authority to $2,500.

  -- Equipment Specialists (BPA):
  $50 or less: Direct call to vendor
  Single Bid (telephone)
  $50 - $100: One Bid (telephone)
  $100 - $250: Two Bids (telephone)
  $250 - $2,500: Three Bids (telephone)
  Over $2,500 procurements are forwarded to Naval Regional Purchasing Office

(2) LP or CP Items:

- Limited to Emergency of $250 per purchase. Equipment Specialists checks with NSC to determine availability. If not available, item may be locally procured as follows:
  $50 - less: One bid required.
  $50 - $100: Two bids required.
  $100 - $250: Three bids required.

D. PWC PROCUREMENT

1. Local Purchase Techniques. The Material Department is authorized to purchase nonstandard (no National Stock Number) items and standard items coded for local purchase as follows:

a. Blanket Purchase Agreements (BPAs) are consummated by the Purchase Branch and signed by the Material Department Supply Management Officer. BPAs are arranged primarily with local (within the Tidewater area) suppliers expressing an interest in providing commonly required materiel quickly. By first using Imprest Funds for small purchases, the Supply Management Officer determines whether or not a vendor will provide satisfactory service. If the service is acceptable, a BPA with the vendor will be established with the vendor in order that purchases may be made on a charge-account type basis. Orders against the BPA is limited to $2,500. The vendors submit invoices on a monthly basis to the Navy Accounting Division for reimbursement. The Material

Department has 213 BPAs established with vendors in the Norfolk area. The BPAs are screened annually to eliminate low use, and/or poor performing vendors.

b. Delivery Orders. Delivery Orders, issued against Federal Supply Schedules (FSS), GSA contracts, are placed on vendors nationwide. The value of orders against FSS may exceed $2,500 and is limited only by the restrictions on quantity or value contained in the FSS.

c. Purchase Orders. Purchase Orders are placed by the Purchase Branch with vendors nationwide and are limited to $2,500 per order.

d. Delivery Orders Against NSC Contracts. For certain items (e.g., salt and sand) the Purchase Department of the NSC Norfolk lets IDTCs with vendors in the Tidewater area. The Purchase Branch of the PWC Material Department orders against these IDTCs. As with FSS contracts, ordering limitations are as prescribed by the IDTC.

e. Imprest Fund. Certain local vendors desire, or demand, cash as purchases are made. For small purchases from these vendors imprest funds are used. Imprest funds buys are limited to $150 per order, and $300 in emergencies.

f. Purchase Requests. For potential purchases exceeding $2,500 per order and not feasible under GSA Schedules or PWC IDTCs, procurement requests, DD Form 1138s, are forwarded to the NSC Norfolk. Such procurement requests may result in purchases by the Purchase Department of the NSC Norfolk or by other purchasing activities (e.g., the DCSC Columbus for wood products).

g. Multiple Sources. Where multiple vendors were recognized and Purchase Orders, BPA orders, or Imprest Funds were being used, PWC Material Department guidance that (a) up to a $50 order, one source could be contacted, (b) for an order having a value of from $50 to $100, two sources should be contacted, and (c) for orders over $100, three sources should be contacted.

2. Costs Involved in Local Purchase

Personnel used to obtain supplies for the support of real property maintenance (excluding transportation) are as follows:

| Dept/Div/Br | Grade | Number | Salary |
|---|---|---|---|
| Material Department | GS-13 | 1 | $24,724 |
| | GS-09 | 1 | 14,563 |
| Material Oper Division | GS-11 | 1 | 17,545 |
| Material & Util Branch | GS-09 | 1 | 14,563 |
| | GS-07 | 4 | 47,696 |
| | GS-05 | 1 | 9,632 |
| | WS-05 | 1 (4.98 p/hr) | 10,358 |
| | WG-06 | 9 (5.25 p/hr) | 98,280 |
| | WG-05 | 15 (4.98 p/hr) | 155,370 |
| Material Requirements Division | GS-09 | 1 | 14,563 |
| | GS-07 | 1 | 11,924 |
| | GS-05 | 5 | 48,160 |
| | GS-04 | 8 | 68,864 |
| | GS-03 | 5 | 38,320 |
| | GS-02 | 2 | 13,592 |
| PWC Personnel Costs | | 56 | $588,154 |

Since 55% of the total dollar expenditure is for local purchase supplies, it is assumed that 55% of the personnel costs are attributed to the local purchase effort. This is computed as follows: $588,154 X .55 = $323,485. Of this amount, $95,564 is attributed to personnel assigned to purchasing branch. The remainder ($227,921) is supply personnel costs. Additionally, the annual telephone bill for the purchasing branch was $11,835 for Fiscal Year 1975.

Costs are incurred by the PWC Accounting Division for bill paying. One supervisor, GS-05, and 4 workers, GS-04, are engaged in accomplishing this function. According to the Director of the Accounting Division, 85% of the work is taken up with paying bills for RPM supplies. This amounts to $37,454 per year. The number of bills paid by this division for RPM supplies is approximately 9,740 per year.

A summary of the costs for obtaining RPM supplies is as follows:

| | |
|---|---|
| $11,835 | Telephone cost |
| 227,921 | Supply |
| 95,564 | Procurement |
| 37,454 | Finance & Accounting |
| $372,774 | Total |

3. Special Local Purchase Actions

LP of CP takes place if, after a stock check at the NSC, a required item is not on hand and the amount of purchase is less than $250. The decision to go LP is made by an Equipment Specialist. For requirements over $250, if materiel is not or will not be on hand by the scheduled date, LP of CP is made to allow work to proceed.

LP is also used to replenish stocks stored in the warehouse. The Purchasing Branch is notified by means of NAVFAC Form 9-423J which is output by the computer when the reorder level of the applicable item is reached. The purchase is made from a vendor handling the required materials.

4. Volume by Type of Procurement Action. The volume of procurement initiated by the Purchasing Branch of the PWC Material Department is shown in Table VII-3.

Table VII-3

PROCUREMENT VOLUME INITIATED BY THE PWC PURCHASE BRANCH (FY 1975)

| Type of Action | Number of Actions | $ Value | Average Value |
|---|---|---|---|
| BPAs | 33,658 | $4,008,130 | $119 |
| DOs (FSSs) | 504 | 1,664,656 | 3,303 |
| POs | 2,281 | 902,876 | 396 |
| DOs (IDTCs) 1/ | 82 | 155,000 | 1,890 |
| Imprest Fund | 600 | 20,619 | 35 |
| Subtotal | 37,125 | $6,751,281 | xxx |
| Procurement Requests 2/ | 161 | 2,155,698 | $13,389 |
| Total | 37,286 3/ | $8,906,979 | xxx |

Source: Field Research; PWC Norfolk, Purchase Branch

1/ Excludes orders for fuel valued at $4.4 million.
2/ Local purchase actions over $2,500 which were submitted to NSC.
3/ These 37,286 actions contained 79,746 line items, and average of 2.14 line items per action.

a. BPA Orders. BPA actions accounted for 33,658 of 37,286 actions (90%) and $4.0 million of $8.9 million (45%) of the procurement value in Fiscal Year 1975. Therefore, a further review of BPA actions was made. The review led to the following observations.

(1) Location of BPA Vendors. As of 1 July 1975 there were 213 BPA vendors. Of these, 206 are located in the Tidewater area within 50 miles of the PWC; seven are located outside of the immediate, local market area. Of the seven BPA vendors located more than 50 miles from the PWC, one is located in Norwich, Connecticut; one is in West Memphis, Arkansas; one is in Kansas City; and one is in St. Paul. Two of the seven distant vendors, American Optical Company in Norwich and United Safety Service Company in Kansas City provide individual, eye-correction, safety goggles. One company, 3M in St. Paul, provides primarily reflective decals. The other four companies provide components and parts for equipment; mostly elevators or materials handling equipment. In aggregate, orders to the distant BPA vendors total less than 3% of the BPA orders.

(2) Line Items Per Order. A review of 120 orders showed the following:

| No. of Line Items Per Action | No. of Actions | Percent |
|---|---|---|
| 1 | 69 | 57.5 |
| 2 | 33 | 27.5 |
| 3 | 7 | 5.8 |
| 4 | 3 | 2.5 |
| More than 4 | 8 | 6.7 |
| xxx | 120 | 100.0 |

(3) Delivery Times. A review of 100 orders from five vendors in the Tidewater area showed delivery times (order date to delivery date) to be as follows:

| Delivery Time | No. of Actions | Percent | Cum % |
|---|---|---|---|
| 1 day | 29 | 29 | 29% |
| 2 days | 16 | 16 | 45 |
| 3 days | 14 | 14 | 59 |
| 4 days | 6 | 6 | 65 |
| 5-10 days | 22 | 22 | 87 |
| Over 10 days | 13 | 13 | 100% |
| xxx | 100 | 100 | xxx |

Generally BPA orders to vendors outside of the Tidewater area specified delivery within 90 days. Of 20 orders reviewed four (20%) were delivered in a 5 to 10 day time period, while 16 (80%) were delivered in a longer than 10-day interval. The longer delivery times are generally associated with components and parts--especially components and parts for elevators and materials handling equipment.

b. Purchase Orders/Delivery Orders. Purchase Orders and Delivery Orders accounted for 2,867 (7.7%) actions and $2.7 million (30.3%) in Fiscal Year 1975. A review of forty such orders showed the following:

(1) Location of PO/DO Vendors. Of forty orders, sixteen (40%) were to vendors in the Norfolk-Tidewater area. The remaining 60% were to vendors in other parts of the country; North, South, and West.

(2) Reason for Buys. The vast majority of orders were related to programmed requirements; only six orders (15%) were for quantities for "inventory" (i.e., stock).

(3) Value of Orders. Orders ranged in value from about $10 to nearly $2,500.

(4) Unit Price. Unit prices ranged from less than one dollar to nearly $2,000 (e.g., a frequency converter $1,970).

(5) Quantity Ordered. Quantities ordered ranged from a single unit to over 500 (e.g., 540 linear feet; 420 bags; 300 gallons; 288 lamps).

(6) Number of Line Items per Order. Orders generally are for a single line item. For the 40 orders reviewed, line items were as follows:

| No. of Line Items Per Order | No. of Orders | Percent |
|---|---|---|
| 1 | 29 | 72.5% |
| 2 | 6 | 15.0 |
| 4 | 1 | 2.5 |
| 5 | 3 | 7.5 |
| 27 | 1 | 2.5 |
| xxx | 40 | 100.0% |

(7) Delivery Times. Delivery times (order date to delivery dates were as follows:

| No. of Days | No. of Orders | Percent | Cum % |
|---|---|---|---|
| 1 | 3 | 7.5% | 7.5% |
| 2 to 10 | 8 | 20.0 | 27.5 |
| 11 to 20 | 11 | 27.5 | 55.0 |
| 21 to 30 | 5 | 12.5 | 67.5 |
| 31 to 40 | 5 | 12.5 | 80.0 |
| 41 to 50 | 4 | 10.0 | 90.0 |
| 51 to 60 | 1 | 2.5 | 92.5 |
| 61 to 90 | 3 | 7.5 | 100.0 |
| | 40 | 100.0% | |

(8) Type of Items Ordered. The item range ordered is extremely broad, including:

Electrical - wire, light fixtures, electric motors, power panel
Floor Covering - cushing, carpets, tile
Hardware - reversible ratchet wrench, door grille
Plumbing - float assembly, agitator, fire hydrant, pipe
Repair Parts - piston ring kit (for gasoline operated compressor)
Wood Products - door, molding, hand rail
Metal Products - steel channel
Paint - all kinds and sizes

c. Procurement Requests. Procurement Requests (DD Form 1138s) for line items having a value of $2,500 accounted for only 0.4% of the actions initiated; however, they accounted for $2.16 million (24.2%) of the procurement value. Review of a line item listing showing items forwarded to the NSC Norfolk for procurement action shows:

(1) Line Item Value. Line item values ranged from just over $2,500 (e.g., electrical cable) to over $70,000 (e.g., piling valued at $71,818 and cable valued at $195,750).

(2) Type of Items. In addition to cable and piling, examples of expensive items ordered are:

| | | |
|---|---|---|
| Valve gates | Steel | Generators |
| Air conditioners | Electrical panels | Preheater tubes |
| Oil pumps | Valves | Replacement towers |
| Air compressor | | |

(3) Location of Vendors. Suggested sources referenced on the item listing are local and nationwide. Certain items (e.g., cable) are distributed from within the Norfolk-Tidewater area. Other items (e.g., piling and lumber) are ultimately purchased by the DCSC Columbus, Ohio, and are shipped into the area.

## E. INDIVIDUAL ITEM RESEARCH

Status of the outstanding items identified below was as of the Study Team visit 8 to 10 September 1975.

1. Work Order No. 1643598: Transformer, U/P $4,000, required to update a portion of the local electrical system. Item was requested 1 October 1974, with a required delivery date of 19 December 1974. Due to the value, the local purchase action was taken by NSC Norfolk; this was done on 20 December 1974, when a contract was placed with Westinghouse, with a delivery date of 15 August 1975.

2. Work Order No. 1263550: Pump, NSN 4320-878-1915, quantity 2, U/P $278, required for a van update program in support of NAVAIR. This item was requisitioned from NSC Norfolk on 13 March 1975, with a required delivery date of 3 April 1975 and an Issue Priority Designator (IPD) of 02; "BB" (backordered) status was received on this item from the Navy Actiation Supply Office. The required job was completed on 4 September by cannibalizing this part from another van due to the priority of this requirement; the backordered item will be used in the cannibalized van.

3. Work Order No. 5102171: There were three outstanding items on this work order--two types of bearings (two required of each type, with unit prices of $159 and $107) and an overspeed trip assembly (one required, at $1,527). All items were requested on 10 January 1974 with a 30 September 1974 required delivery date; these items were recognized as being subject to long leadtimes. They were actually ordered via local purchase on 16 January 1974 from the sole source supplier, Elliott Turbine Co. Followups were made to this supplier throughout 1974-75; the most recent promised shipment date received from the supplier was 15 August. These items were required to overhaul a boiler and, although this order has not been received, the work has actually been completed using materiel left over from previous overhauls. When received, these items will go into stock as insurance items.

4. Work Order No. 1013940: Valve gate, quantity 72, unit price $60, total value $4,320. This materiel was requested on 5 March 1973,

with a required delivery date of 29 June 1973. This item was requisitioned from NSC Norfolk, which sent a Military Interdepartmental Purchase Request (MIPR) to DCSC on 15 March 1973; the MIPR was accepted by DCSC on 2 April 1973 for local purchase action. The problem on this item was that a supplier could not be found who would meet the original specifications; changed specifications still produced no bidder. A nonspecification item was offered by the Crane Co., which proved unable to make delivery due to problems with subcontractors. This job involves the repair of steam valves at Pier #2; the system is continuing to operate, but low pressure valves are being used on a high pressure system.

5. Work Order No. 1013943: There were four items outstanding on this work order, all local purchase: two varieties of packing, quantity of one a $2 and quantity of two of the other at $14 each; one piston ring at $135; and, one gasket at $20; total value outstanding totals $185. This materiel was requested on 19 June 1973 with a required delivery date of 29 November 1973; there were 15 items on the order with a total value of $3,318. A Request for Quotation was issued to the sole source supplier on 6 July 1973; an unsatisfactory quotation was received on 11 September 1973. A MIPR was sent to DCSC by NSC on 15 January 1974 for further procurement action. The job, which involved overhaul of a steam turbine in the power plant, has actually been accomplished. When received, these outstanding parts will be placed in insurance stocks.

## CHAPTER VIII

## NORFOLK NAVAL SHIPYARD

### A. MANAGEMENT DATA

#### 1. Installation Organization

The basic mission of the Norfolk Naval Shipyard (NNSY) is to provide shipwork and component repair, as directed by Naval Sea Systems Command (NAVSEA). Overall organization of NNSY is shown in Figure VIII-1.

Civilian manning of NNSY, by major organizational element, is shown in Table VIII-1. In addition to the 9,773 civilians authorized as of 30 June 1975, NNSY was authorized 270 military personnel as follows:

| | Navy | Marine |
|---|---|---|
| Officer | 68 | 8 |
| Enlisted | 69 | 125 |
| | 137 | 133 |

The bulk of the Navy officer personnel are authorized to the Production Department, while the Navy enlisted personnel are authorized as small craft crews. Marine Corps personnel are generally authorized for shipyard security.

#### 2. Public Works Department

The facilities engineer function at NNSY is accomplished by the Public Works Department (PWD). The PWD does planning, estimating, and inspection of all buildings for electrical, mechanical, or structural defects and prepares plans to repair same by contract or in-house personnel. The PWD also inspects all utilities for defects and supplies fresh-water, salt-water, heat, electricity, steam, compressed air and fresh air, and prepares plans to repair utilities systems by contract or in-house personnel. Performs similar functions for grounds and ground structures.

The Public Works Officer (PWO) serves as head of the PWD and when so directed by Naval Facilities Command (NAVFAC) serves as officer-in-charge of construction (OICC) and/or resident officer-in-charge of construction (ROICC).

## SHIPYARD ORGANIZATION
## NORFOLK NAVAL SHIPYARD

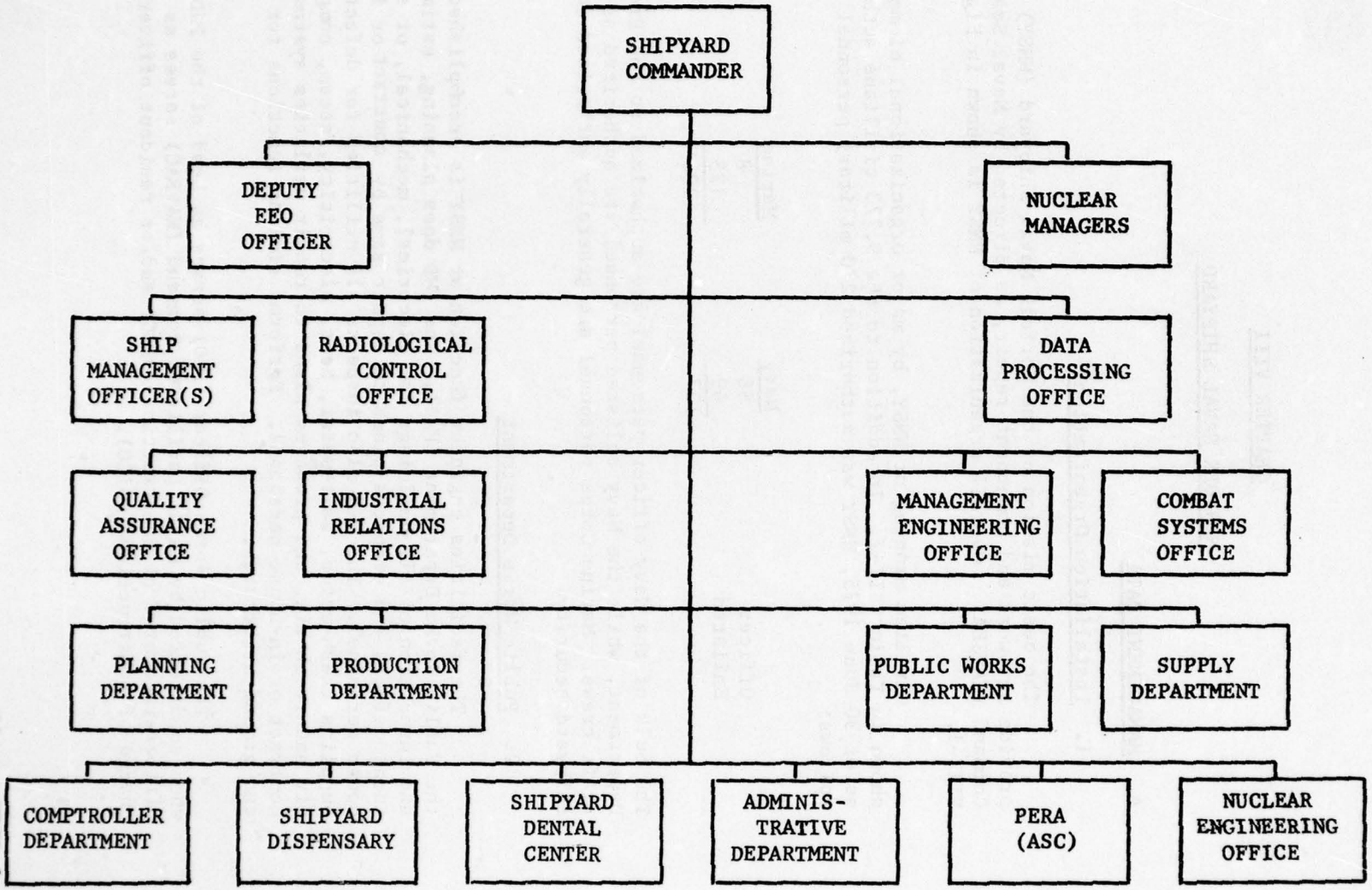



Figure VIII-1

## Table VIII-1

### PERSONNEL AUTHORIZATIONS
### NORFOLK NAVAL SHIPYARD

| Department/Office | On Board |
|---|---|
| Shipyard Commander | 5 |
| Radiological Control | 63 |
| Equal Employment Opportunity | 3 |
| Data Processing | 70 |
| Quality Assurance | 346 |
| Management Engineering | 8 |
| Industrial Relations | 84 |
| Combat Systems | 90 |
| Planning | 719 |
| Production | 6,747 |
| Public Works | 814 |
| Supply | 404 |
| Comptroller | 90 |
| Administrative | 197 |
| PERA ASC | 41 |
| Nuclear Engineering | 92 |
| TOTAL | 9,773 |

Source: Field Research

The PWD, NNSY, is staffed with 810 civilian personnel and 63 temporary employees. The 810 civilian spaces are distributed as follows:

| | |
|---|---|
| Administrative | 15 |
| Maintenance Control | 46 |
| Crane Quality Assurance | 15 |
| Engineering | 39 |
| Shop Division | 39 |
| Transportation Shop | 341 |
| Utilities Shop | 154 |
| Maintenance Shop | 161 |
| Civilian | 810 |
| Officers | 3 |
| | 813 |

A supply clerk within the Maintenance Control Division is the contact between PWD and Shipyard Supply Department. The position was vacant at the time of the visit.

The organization of the Public Works Department for the accomplishment of these functions is shown in Figure VIII-2.

3. Supply Department

There is no supply function established within the facilities engineer organization, the Public Works Department, at NNSY. Supply support to the Public Works Department is provided by the Supply Department, which is responsible for:

(1) Procurement, receipt, control, storage, and delivery of materiel to support the Shipyard; and,

(2) Stocking and operation of shops stores.

The organization of the Supply Department for the accomplishment of these functions is shown in Figure VIII-3.

The NNSY supply operation is a computer-based management supply system which interfaces the DoD logistics system through MILSTRIP. The installation supply operation provides supply support through the establishment of 27 retail shop store outlets located in various maintenance areas throughout the shipyard. Stocks carried in the shop stores are retail type items (expendables) and are: standard materiel (National Stock Numbered items), nonstandard items, insurance items (standard or nonstandard), and self-service items (pre-expended--standard or nonstandard). Following breakdown of materiel carried in shop store.

All Shop Stores (27)

(As of 10 Sep 75)

| | |
|---|---|
| Line Items Carried--Total | 20,312 (net)<br>24,418 (gross) |
| (Nonstandard Carried--LP) | (7,360) |
| (Insurance Items Carried LP and CP) | (3,374) |
| Total Value Shop Stores (Aug 75) | $9.9M |
| Value of Sales/Issues (FY 75) | $12.3M |

4. Central Procurement

All local purchasing for the Public Works Department (PWD) is performed by the Purchase Division of the Supply Department which has authority to make purchases up to $15,000. This authority is used only at the discretion of the Supply Department Supply Officer. Purchases above $15,000 are referred to the Naval Supply Center (NSC).

**PUBLIC WORKS DEPARTMENT**
NORFOLK NAVAL SHIPYARD

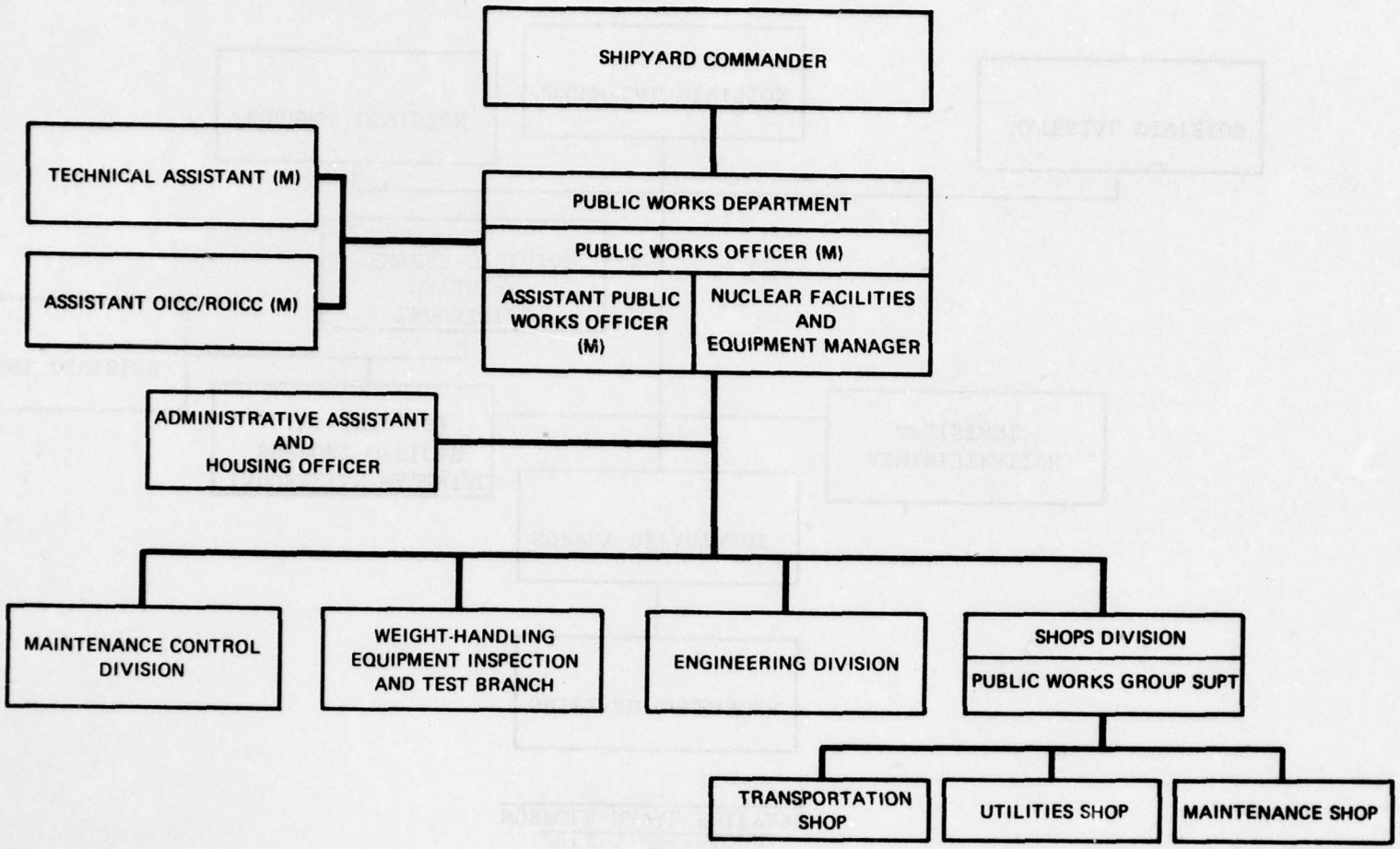



Figure VIII-2

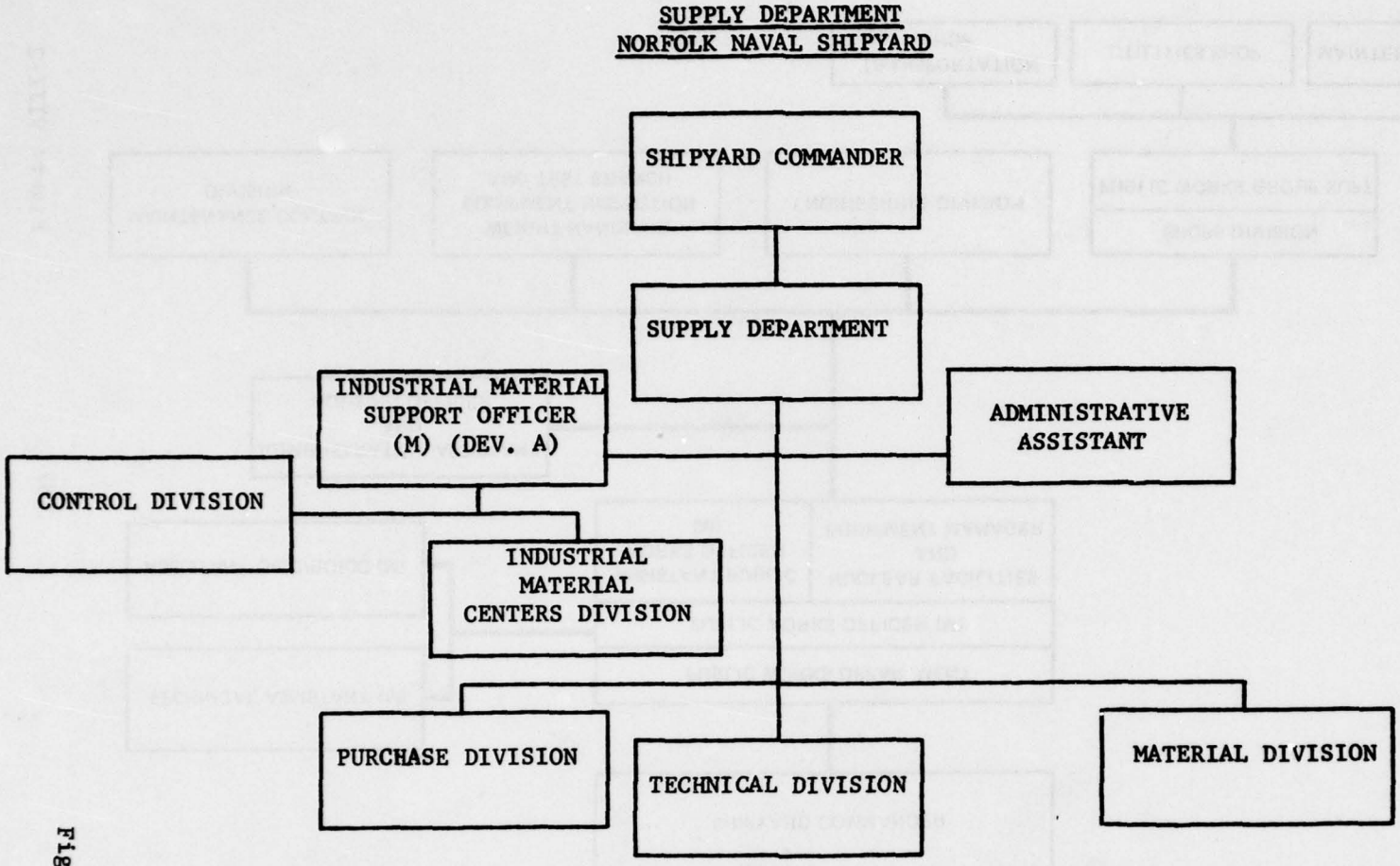



Figure VIII-3

The Supply Department operates three shop stores for support of the PWD. One of the stores, Shop Store 07, is primarily dedicated to support the Real Property Maintenance (RPM) function. This store stocks 2,208 line items, 792 (36%) of which are locally purchased. To keep stocks of local purchase items at desired levels, and to purchase items to satisfy job order requirements, a BPA clerk, GS-05, is assigned to shop store 07. This clerk has authority to locally purchase materiel up to $500 per transaction without competition, and over $500 to $750 with competition among local vendors.

5. Basic Supply Statistics

| | |
|---|---|
| Number Line Items | |
| Total | 24,418 |
| Facilities Engineer (FE) | 2,771* |
| Issues/Sales | |
| Total | $12.3 million* |
| FE | .6 million* |
| Inventory | |
| Total | $ 9.9 million* |
| FE | .7 million* |

*Excluding vehicle maintenance

B. FACILITIES ENGINEER DATA

1. Functions and Operations

a. Workload Generation. Work is divided into two general categories described below:

(1) Service Calls/Emergency Work--This type work requires 16 hours or less. The work is not scheduled and is accomplished as required. The request for the work is called into the PWD and then teletyped to the respective shop. Emergency work is started immediately; whereas, service calls are accomplished as time permits. Supplies for service calls/emergency work (SC/EW) are usually available from, and drawn from the supporting shop store. When job is completed notification is provided to the customer. Work that will require more than 16 hours or is beyond the SC/EW scope is classified as the second type of work. Approximately 10% of the PWD work is of an emergency/service nature.

(2) Routine--Normal Maintenance, Repair Work, and Alterations that require more than 16 hours to accomplish are considered routine in nature.

b. Scheduling. Scheduling of work depends more upon manpower than materiel. Jobs initially scheduled and add-ons for September 1975 totals 146, amounting to 11,949 man-hours. The submission of Material Service Requests (MSRs) was necessary for only 21 of the 146 jobs. The MSRs had an estimated value of $21,349. Materiel follow-up was necessary for nine of the 21 MSRs which applied to eight jobs. Less than 6% of the jobs for September 1975 required materiel; however, 30% of the programmed work could not be supported with manpower. Because of manpower limitations jobs are already scheduled into 1976. During the week of 15 through 19 September 1975 there were 68 jobs scheduled to begin, and only two of these jobs lacked supplies.

The work is planned and estimated as follows:

(1) The planner, estimator, performs an inspection of the job to be done and submits a report.

(2) Job, when approved, is written-up and decision is made as to whether it will be accomplished in-house or by contract.

(3) Job goes to technician for determination of supplies and materiel required.

(4) Format for routine normal maintenance and repair work and alterations is shown below:

--Job Order (Form 5ND, NNSY, 4701/26) with continuation sheet.

--Job Material List (Form 5ND (NNSY) 4235/4).

--Material Service Request (Form 5ND NNSY 4235/5).

--Other drawings or forms as necessary.

(5) When it is determined that the job will proceed funds are reserved and materiel are ordered. Arrival notices are furnished by supply to the PWD and upon receipt of materiel the job is scheduled for accomplishment. It was estimated that 90% of the work of the PWC falls within the routine normal maintenance and repair work and alteration category. Job scheduling is dependent more on the availability of manpower than supplies. Jobs are scheduled over a six-month period.

2. Supply Support

Supplies and materiel are made available to the PWD from a number of sources.

a. Shop Stores are located in the PWD work area but remain under the control of the Supply Department. Workmen draw supplies by use of an instrument referred to as a "chit" (Form 5ND NNSY 4402/6 (MIS-Shop Stores Issues/Credit Card).)

b. Pre-expended supplies are those standard or nonstandard items under $2.00 in value available to shop personnel without preparing an issue slip. Pre-expended stock falls into two types, items that are controlled and items that are noncontrolled. Controlled items are maintained in a central location; whereas, noncontrolled items are retained in the immediate work area. Items consumed are periodically replaced and the cost is charged to respective work accounts. Pre-expended items are also referred to as self-service items.

c. Direct Material Inventory (DMI) covers items collected for routine normal maintenance and repair work and alteration. The items are those listed on the Job Material List (JML) and/or Material Service Request (MSR) portions of individual jobs. The items are accumulated and warehoused by Supply Department until the call for the respective work to begin. Items, although retained by the Supply Department, are funded by and belong to the PWD.

d. Direct turn-over items (DTO) are acquired for special jobs. The items are obtained as rapidly as possible and turned over to the respective shop immediately upon receipt.

e. Excess from completed jobs are a source of supply. Excess and left-overs are consumed with or without formal accounting. Items not returned to Supply Department are stored in shop areas and attrited until completely consumed. Examples of items attrited are locknuts, straps, and screws. During discussion with a planner/estimator it was noted that at least in one instance an item described as a Trupper (fixture, electric, lighting) 40W was made available from Building 381.

3. Supply Issues

Job Material List (JML) and Material Service Requests (MSRs) are a portion of an individual job under routine normal maintenance and repair work and alterations. JMLs and MSRs are hand-carried to Supply Department when the job is urgent.

a. The JML lists Navy standard or nonstandard items, that are normally stocked and usually available from supply. Items not stocked or stocked quantities are insufficient, must be requisitioned. JML items are listed in a shop stores catalog made available as a reference to personnel of the PWD. Shop stores list 20,312 line items as available. During 1975 171 JMLs were processed.

b. The MSR lists items that are nonstandard and/or nonstocked and usually purchased locally. MSR items are forwarded to the Purchasing Division and subsequently the PWD is advised when the materiel is due-in. Jobs are scheduled depending upon supply availability. MSR materiel is frequently that kind stored as DMI. The PWD is advised by an "Arrival Notice" when items are received. The MSR items are signed for by the mechanics or supervisor when removed from the DMI. Purchases up to $15,000 can be made if necessary. During Fiscal Year 1975, 579 MSRs were processed.

4. Funding

Jobs are begun and accomplished only after materiels are on hand, and required manhours are available to do the work. During discussion it was indicated that about 10% of the jobs will contain a target completion date. Funds are set aside for the total estimate when the job is assigned the 10-digit job order number. The job identification is key-punched into the computer for financial application and the PWD funds are reserved.

The 10-digit job order number is composed as follows:

Number 9472 63 1111

9--NIF overhead
472--Cost function (Production Bldg)
63--Cost class (Maintenance)
1111--Serial Number

At the time of the visit (11-12 September 1975) 78 jobs were being held pending receipt of supplies in the materiel holding area. During the month of September 134 jobs were scheduled to begin.

Most work deadlines are applicable to the utilities requirements. Special arrangement must be made to acquire materiels when the usual supply source is nonresponsive. If the materiel requirement is for $500 or less the provision of a Blanket Purchase Agreement (BPA) are utilized on an expedited bases. The nature in which the job will affect the shipyard determines if a deadline is assigned.

5. Stock Replenishment

Stock levels and stock replenishment are controlled by the Supply Department. The PWD provides a temporary level for a new item but subsequent to the initial stockage, supply computes authorized levels. Levels for DMI are based upon requirements submitted by the PWD.

6. Excesses

Excesses generated by the PWD are stockpiled for possible future use on another job order or turned into the Supply Department through a "brown-stub" document. There was no easy way to determine the value of their on-hand excess. Shop personnel indicated during discussion that retained excess had only an inconsequential value.

C. CENTRAL SUPPLY

1. Supply Support to the FE

a. PWD Shop Stores. Of the 27 stores throughout the installation, three primary stores have been established to support the PWD operation; however, materiel can be made available from any of the 27 stores to support the PWD requirements. Each shop store operation is open around-the-clock, seven days a week, so the mechanic can draw and/or order his materiel to accomplish PWD work. Depending on the urgency of the item, the shop store personnel will either issue the store stock item, order the materiel through the DoD standard supply system, or will request immediate local purchase of the materiel ($500 limit) through one of the established BPAs to satisfy urgent requirements. The following data reflects PWD shop store activity for the month of August 1975 for two stores. Shop Store 20 (Vehicle Maintenance) not included.

PWD Shop Stores
(August 1975)

| | Power Plant Shop Store 03 | Maintenance Shop Store 07 |
|---|---|---|
| Inventory Value | $119,500 | $628,200 |
| Line Items Carried | 539 | 2,232 |
| Pre-expended Value | - | 179,700 |
| Not in Stock (NIS) | 58 | 133 |
| Value of Sales (Fiscal Year 1975) | $ 32,711 | $598,946 |
| Labor Costs (Fiscal Year 1975) | $ 12,938 | $ 51,752 |

b. Shop Store Stock. Three categories of materiel are available from the Shop Store Outlets for direct issue requirements.

(1) Pre-expended Materiel. A 90 day stock of fast moving bench stock type items (expendable) available in a self-service center without a formal issue request with a unit cost under $2.00. Items are either standard (stock numbered) or nonstandard (no stock number) and are located in the maintenance shop areas for customer

convenience. Replacement of stock is made on a quarterly replenishment cycle. Out-of-stock items are replenished at any time during the cycle to insure that stock is always available. Navy revolving capital funds are reimbursed after completion of the quarterly inventory for items used during the preceding quarterly period.

(2) Stocked Items. These items are stocked in a secured area in the Maintenance Shop and are controlled by Supply Department personnel. Items are either standard (NSN) or nonstandard (local stock numbered) items. These items are the slower moving, more expensive expendable items which are stocked for customer requirements. A 90 day level is authorized for standard materiel. For nonstandard items, a stock level of 120 days is authorized. All levels of stock are subject to some degree of variation depending on past leadtime experience in acquiring the item. The general policy for stocking an item is that there must be a firm requirement at least four separate times during the year before the item is considered for shop stock. The Maintenance Shop foreman and the Supply Officer review and approve the addition of new items to the shop store inventory. Navy revolving capital funds are reimbursed by customer (shop/job order) funds when items are issued.

(3) Insurance Items. These items are slow moving items for which consumption or usage cannot justify a regular stock level. Stockage is limited to a replacement quantity which can be obtained within a reasonable time period. A 90 day level of stock is authorized with replacements reordered on a "one-for-one" basis; that is, when one is issued to a customer, a replacement is ordered immediately for stock regardless of the reorder point. The shop foreman and the installation supply officer approve the retention level of insurance items, within the limitation that not more than 10% of the items stocked in the shop store outlets may be carried as insurance type materiel.

c. Receipt Processing and Inventory Control. As materiel is received from the various sources, the Receipt Control Branch inspects and distributes the materiel direct to the appropriate shop store or maintenance activity. Currently, as materiel is processed into either the shop store stock or into the Direct Material Inventory (DMI) account, it is retained under Supply Department control until released for job order requirements by the PWD.

(1) Shop store stock is retained as Navy Industrial Fund property. It is not expended or "paid for" by customer until issued through the shop store outlet. As items are issued, the NIF is credited from the respective maintenance shop NIF fund and recycled through the supply system for replenishment of stock or new procurement.

(2) Direct Material Inventory (DMI) is materiel procured, and held in temporary storage earmarked for a specific program. PWD Industrial Funds (NIF) have been expended for the procurement of DMI materiel. DMI materiel bypasses the shop store outlet and is issued as directed by the PWD to various shipyard materiel control centers to satisfy approved job order requirements. DMI stocks are not part of the shop store inventory, and are held temporarily in storage pending customer requirement. As of 30 June 1975, DMI materiel carried in the ten Shipyard Material Control Centers was as follows:

| | |
|---|---|
| Average Line Items Carried: | 54,439 |
| Average Dollar Value: | $7,009,861 |
| Average Monthly L/I Reqn/Issues: | 24,395 |
| Average Value Monthly Issues: | $3,062,021 |

d. Shop Store Sales/Issues

(1) Pre-expended Materiel. Items are available through various self-service outlets located throughout the maintenance shop areas. No formal issue request is required to obtain the materiel.

(2) Controlled Stock

(a) Stocked Items. For direct "over-the-counter" items for stocked items, a shop store issue card (chit) or a Material Service Request (MSR) is required for each item requested. When a direct issue is made, the shop NIF is billed to reimburse the Supply Department Navy Industrial Fund.

(b) Nonstandard Items (stocked or nonstocked). For nonstocked commercial items the BPA shop clerk has the authority to local purchase item(s) up to $500 without formal bid or bid competition. For items between $500 to $700, two or more bids are required for purchase. For emergency requirements, the Shipyard supply officer may authorize a purchase up to $15,000. Upon receipt, issue is made by the shop store direct to the customer. For Fiscal Year 1975, shop store sales and labor costs were reflected as follows:

Shop Store Sales/Costs
(Fiscal Year 1975)

| Store | Sales | Labor Costs |
|---|---|---|
| Power Plant Store--03 | $ 32,711 | $12,938 |
| Maintenance/Repair Store--07 | 598,946 | 51,752 |
| Automotive Store--20 | 666,648 | 77,628 |
| Total all stores (27) | $12,312,911 | Not provided |

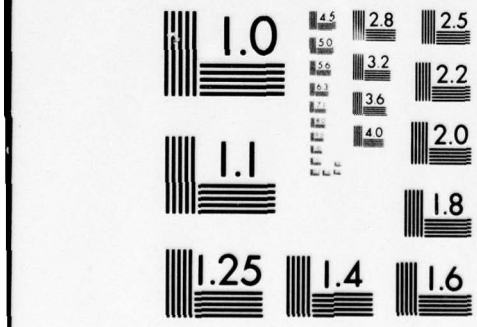
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MATERIEL SUPPORT TO CIVIL ENGINEER OPERATIONS. VOLUME II. FIELD--ETC(U)
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2. Supply Sources

Items requisitioned and received into the Navy Shipyard complex come from various sources such as through the Navy Supply system (NSC Norfolk), GSA, DSA, and/or commercial sources. Materiel to support the PWD operation is acquired through the submission of the requisition documents to the appropriate source. An overall 95% fill rate from DSA Centers has been attained for NSY requisitions submitted to Norfolk NSC for supply action, with about 60% being filled immediately from the NSC/DSA prepositioned stocks. Those requisitions that are not filled by the NSC/DSA prepositioned stocks (40%) are either passed to the appropriate ICP for action or purchased by NSC as appropriate. Generally the pattern shown in Figures VIII-4 and VIII-5 is followed.

D. CENTRAL PROCUREMENT

1. Local Procurement Criteria

Local purchase of centrally procured items takes place if the required items are not in stock and/or is required within 30 days to meet a scheduled job date. These local purchase actions are made up to a limit of $750.

To obtain items from the Supply Department, a Job Material Listing (JML) or a Material Service Request (MSR) is submitted from the PWD. The MSR is the primary instrument used to obtain supplies that are locally purchased. After the MSR is screened by the Supply Department and found to be eligible for local purchase, it is referred to the Purchasing Division for a decision on the of purchase instrument to be used for procuring the item. This decision is made by first determining whether or not a contract exists for the item(s) to be purchased, such as a Federal Supply Schedule. If there is no contract and the purchase is above $10,000, a Standard Form 26 Contract Award is used. If it is under $10,000 and a BPA has not been established for the item(s), a DD Form 1155 (or SF 26) is used. Of course, a BPA is also used for purchases under $10,000 if one is established. Imprest funds are used in lieu of the DD Form 1155 if the purchase amount is under $300 and there is no BPA established.

The predominant number of purchases are made by the BPA method. BPAs are established by the contracting officer or his assistant after a local vendor has shown satisfactory performance in providing supplies. A DD 1155 signed by the contracting officer is kept in file with pertinent information on each BPA. The BPA file is screened annually to eliminate poor performing vendors, and those BPAs which reflect low use.

## STANDARD/NONSTANDARD STOCKED ITEMS

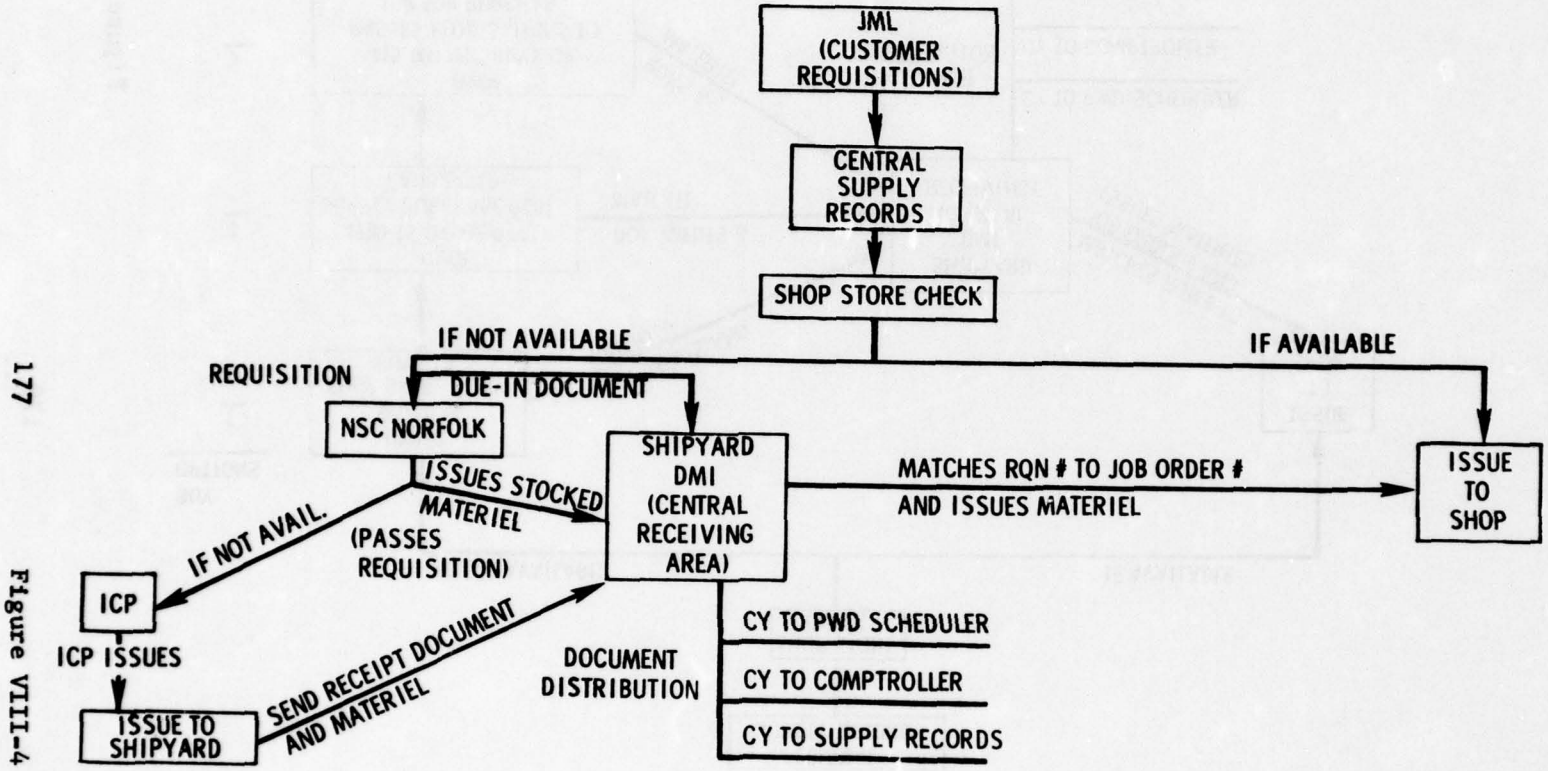



Figure VIII-4

## NONSTANDARD/NONSTOCKED LOCAL PURCHASE ITEMS

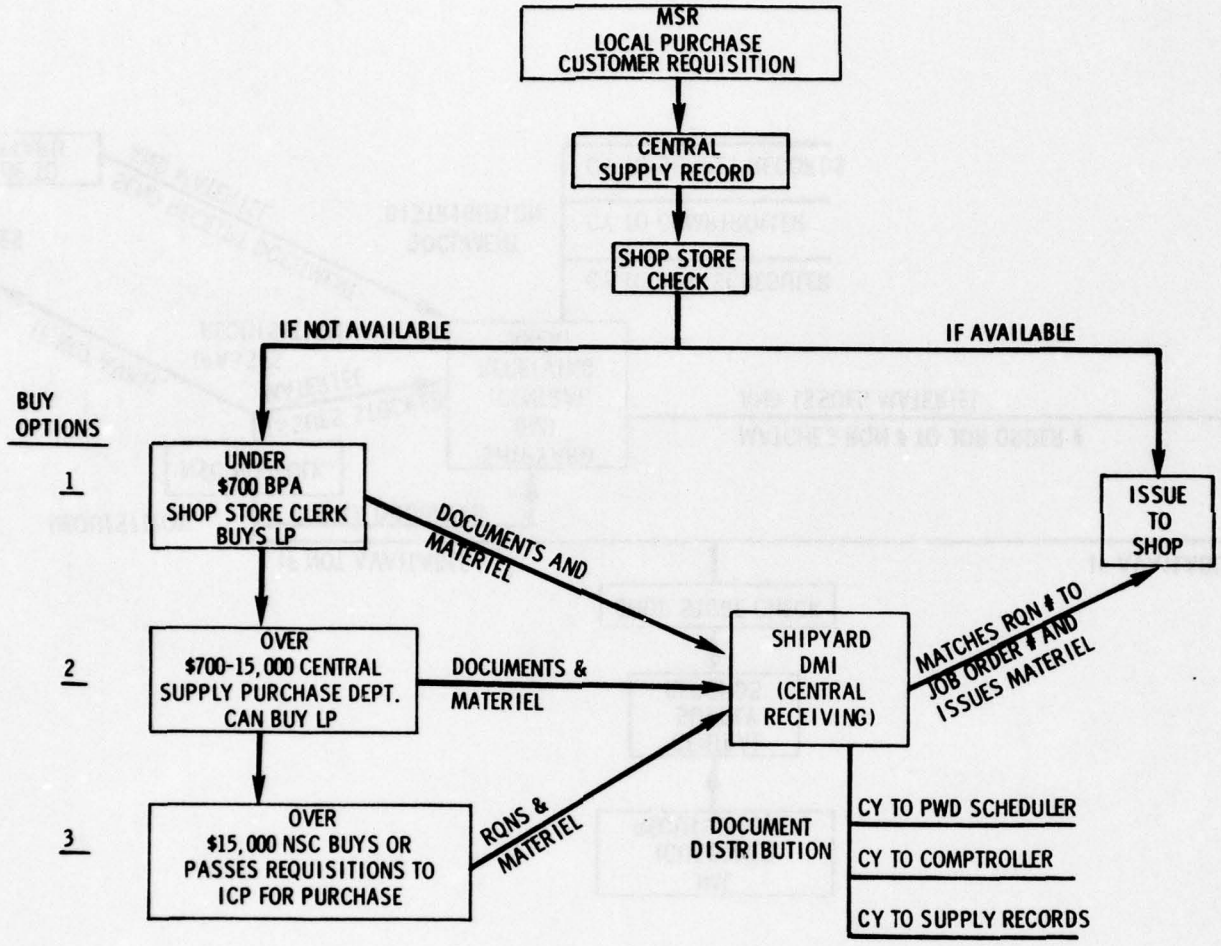



Figure VIII-5

2. Local Procurement Techniques

The following are total purchase actions by type and quantity made in Fiscal Year 1975 by the Purchasing Division for all Navy Shipyard functions.

| | |
|---|---|
| BPA | 23,900 |
| Purchase Orders | 7,500 |
| Delivery Orders | 2,000 |
| Contracts | 350 |
| Imprest Funds | 750 |
| Modifications | 700 |
| TOTAL | 35,200 |

The above actions resulted in the expenditure of $14.8 million.

The average number of BPA actions made in Shop Store 07 was 271 for the months of February through August 1975. The annual usage of the BPA is computed to be 3,252. This number represents about 13.6% of the total. Assuming this percentage is the same for all instruments the purchase actions made in behalf of the PWD for real property maintenance would be as follows:

| Type | Number | % of Total |
|---|---|---|
| BPA | 3,252 | 68% |
| Purchase Orders | 1,020 | 21 |
| Delivery Orders | 272 | 6 |
| Contracts | 48 | 1 |
| Imprest Funds | 102 | 2 |
| Modifications | 95 | 2 |
| TOTAL | 4,789 | 100% |

According to information obtained from the PWD, the expenditure for PWD supplies from Shop Stores 03 and 07 was $806,000 in Fiscal Year 1975. Estimates from the PWD indicate that $544,865 or 68% was spent for local purchase in these shop stores.

3. Local Purchase Costs

The following labor costs to operate Shop Stores 03 and 07 were provided by the Supply Department.

| | |
|---|---|
| Shop Store 03 | $12,938 |
| Shop Store 07 | 51,752 |
| TOTAL | $64,690 |

Since 68% of the total expenditure for supplies was for local purchase supplies, it is assumed that 68% of the labor cost is attributed to local purchase. This amounts to $43,989.

Figures were not obtainable to determine other costs associated with acquiring supplies, such as delivery, or telephone costs.

Billing costs can be computed based on the total disbursements made by the Comptroller, Accounts Payable Unit. Total disbursements for Fiscal Year 1975 were $36.67 million. Since it was determined that $544,865 worth of supplies were locally purchased for the PWD Shop Stores 03 and 07, the assumption is also made that 1.5% of the bill paying effort is done by the Bill Paying Unit in behalf of the PWD. Personnel engaged in the bill paying effort include:

| Number | Grade | Annual Salary (Step 5) | Total |
|---|---|---|---|
| 5 | GS-[illegible] | $ 8,608 | $43,040 |
| 1 | GS-[illegible] | 9,632 | 9,632 |
| 1 | GS-[illegible] | 10,737 | 10,737 |
| | | TOTAL | $63,409 |

The amount attributed to the PWD bill paying effort is $951.

Moreover, one GS-05 with a salary of $9,632 is assigned to Shop Store 07 to make BPA purchases.

A summary of the costs for obtaining RPM supplies is as follows:

| | |
|---|---|
| 9,632 | Procurement |
| 43,989 | Personnel Warehousing |
| 951 | Bill Paying |
| $54,572 | TOTAL |

These costs, although not all inclusive, indicate that it costs $100.16 to locally purchase $1,000 worth of supplies.

# CHAPTER IX

# PUBLIC WORKS CENTER, GUAM

## A. MANAGEMENT DATA

### 1. Public Works Center Organization

The mission of the Public Works Center (PWC) Guam is to provide public works, public utilities, public housing, transportation support, engineering services, and shore facilities planning support. This support is provided to all Naval activities on the island, to a limited extent to the Air Force, and to other federal agencies including the government of Guam. Due to the long association of the Navy with the island of Guam, PWC responsibilities include some areas of support to the island civilian population (e.g., in electrical power supply).

The organization of PWC for the accomplishment of this mission is shown in Figure IX-1. Total manning of PWC Guam includes 1,250 civilian personnel and 18 officers (11 authorized to the PWC and seven authorized elsewhere but assigned for duty at the PWC).

### 2. Materiel Support Organization

The PWC contains its own materiel support capability, in the Material Department of the Operations Group. The overall organizational location of the Material Department within the PWC is shown in Figure IX-1.

The mission of the Material Department is to requisition, receive, store, and issue supplies and equipment required by the PWC. The organization of the Material Department for the accomplishment of this mission is shown in Figure IX-2. Major functions of the organizational elements of the Material Department are as follows:

(1) Requirements Division

(a) maintain mechanized stock records, and control stock replenishment actions;

(b) monitor requisitions, coordinate follow-up actions, and process materiel receipts to the mechanized record; and,

(c) provide technical advice on item identification, reparability, and substitutability.

PUBLIC WORKS CENTER, GUAM

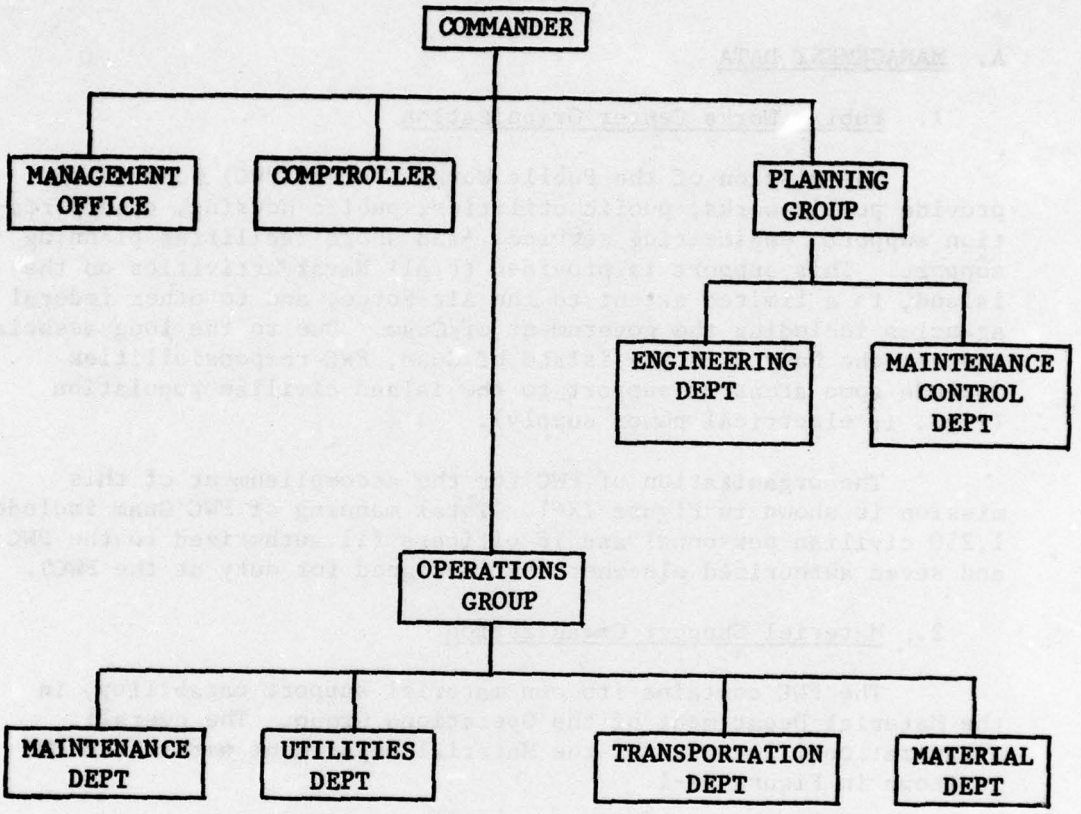



Figure IX-1

## SUPPLY SUPPORT ORGANIZATION
## PWC GUAM

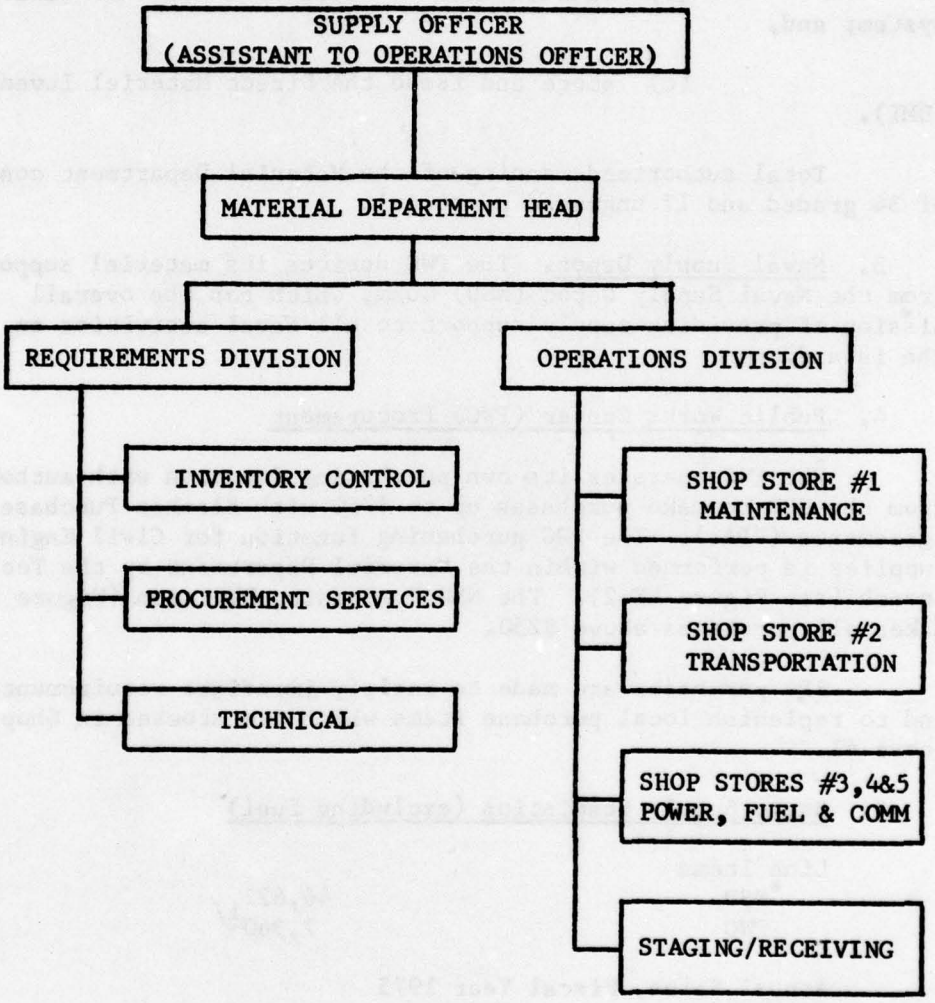



Figure IX-2

(2) Operations Division

(a) receive, inspect, store, and issue materiel;

(b) operate service stations and a fuel delivery system; and,

(c) store and issue the Direct Materiel Inventory (DMI).

Total authorized manning of the Material Department consists of 34 graded and 17 ungraded personnel.

3. Naval Supply Depot. The PWC derives its materiel support from the Naval Supply Depot (NSD) Guam, which has the overall mission of providing supply support to all Naval activities on the island.

4. Public Works Center (PWC) Procurement

The PWC operates its own purchasing function with authority from the NSD to make purchases up to $250 with Blanket Purchase Agreements (BPAs). The PWC purchasing function for Civil Engineer supplies is performed within the Material Department by the Technical Branch (see Figure IX-2). The NSD Purchasing Division (Figure IX-3) makes all purchases above $250.

BPA purchases are made to satisfy immediate requirements and to replenish local purchase items which are stocked in Shop Store #1.

5. Basic Supply Statistics (excluding fuel)

| | |
|---|---|
| Line Items | |
| NSD | 46,627 1/ |
| PWC | 7,360 1/ |
| Annual Sales, Fiscal Year 1975 | |
| NSD | $26.7 Million |
| PWC | 1.8 Million |
| Inventory Value | |
| NSD 2/ | $29.1 Million 4/ |
| PWC 3/ | 2.0 Million 4/ |

1/ Excluding DMI excess and transportation
2/ As of 1 July 1975
3/ As of 31 October 1975
4/ Excluding transportation shop store and DMI, and fuel.

PURCHASING DIVISION
NSD GUAM

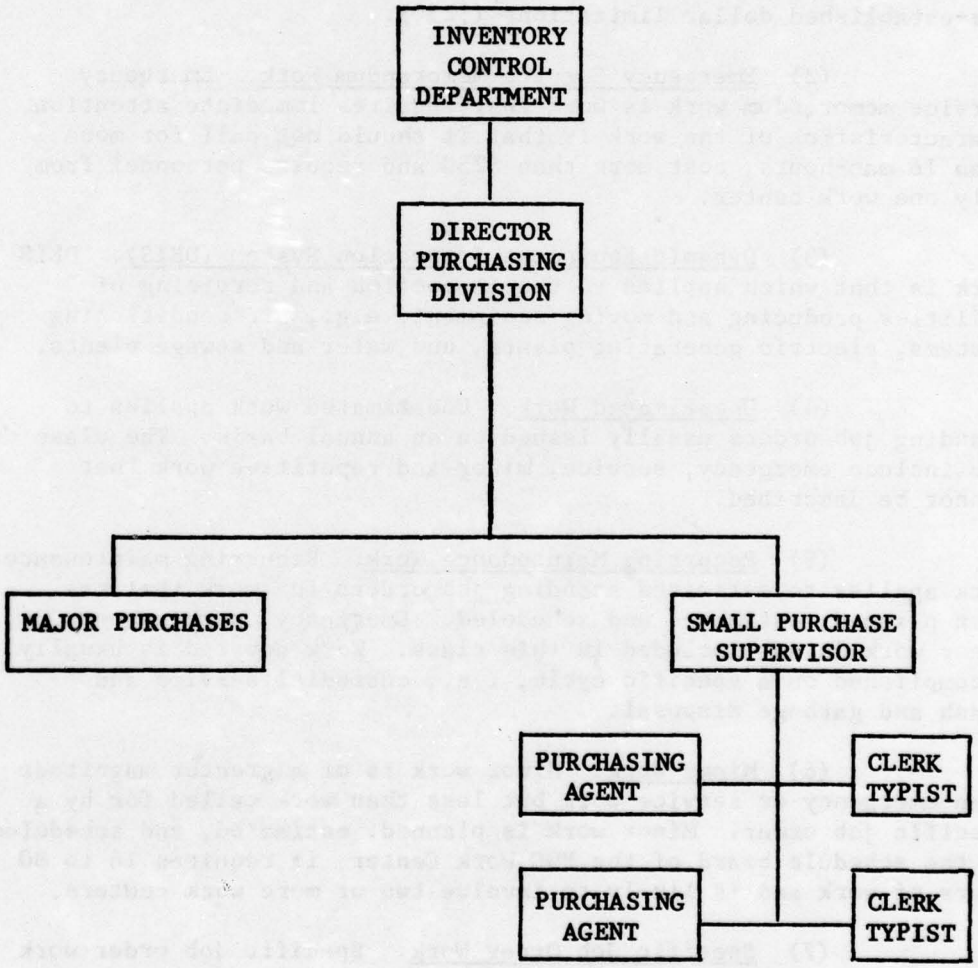



Figure IX-3

## B. FACILITIES ENGINEER DATA

### 1. Functions and Operations

a. Types of Work. The PWC provides maintenance, repair, alterations, and improvements to facilities on a reimburseable basis. Types of work are as follows:

(1) Service Work. Service work is minor in scope (not emergency) and can be accomplished within 2 man-days and pre-established dollar limitations ($250).

(2) Emergency Service Memorandum Work. Emergency service memorandum work is work that requires immediate attention. Characteristics of the work is that it should not call for more than 16 man-hours, cost more than $250 and require personnel from only one work center.

(3) Dynamic Equipment Inspection System (DEIS). DEIS work is that which applies to the inspection and servicing of utilities producing and moving equipment, e.g., air conditioning systems, electric generating plants, and water and sewage plants.

(4) Unestimated Work. Unestimated work applies to standing job orders usually issued on an annual basis. The class can include emergency, service, minor and repetitive work that cannot be described.

(5) Recurring Maintenance Work. Recurring maintenance work applies to estimated standing job orders for work that has been planned, estimated and scheduled. Emergency, service, or minor work is not included in this class. Work covered is usually accomplished on a specific cycle, i.e., custodial service and trash and garbage disposal.

(6) Minor Work. Minor work is of a greater magnitude than emergency or service work but less than work called for by a specific job order. Minor work is planned, estimated, and scheduled on the schedule board of the PWC Work Center, it requires 16 to 80 hours of work and is likely to involve two or more work centers.

(7) Specific Job Order Work. Specific job order work requires careful planning, estimating and scheduling of man-hours and materiel. Specific job order work is usually performed for another department or activity, married officers' quarters having expenditure limitations, to correct prior PWC work, and work over and above minor work.

b. Workload Generation. Workload generates from oral (telephone) or written requests and in-house inspection.

(1) Oral (Telephone). Emergency or service work is called into the work reception centers, which is followed by preparation of an emergency or service memorandum. The memorandum is dispatched to the work center/shop to accomplish the work. Generally, materiel and supplies for the work are available from the vehicle responding to the call. Items not available from the vehicle are supplied from installation stock or purchased locally. The work becomes a specific job when it is necessary to order materiel outside of Guam.

(2) Written Requests. Customers generate requests by preparation of NAVFAC Form 9-11014/20 (Work Request (Maintenance Management)). Work of this kind is primarily requests for alterations and improvements to facilities. Steps for processing a customer request follows:

(a) Customer submits request to Maintenance Control Department (MCD). Requests requiring the attention of the Staff Civil Engineer (SCE) or the Public Works Officer (PWO) are routed to MCD through the SCE or PWO.

(b) MCD assigns the request a priority code A, B, or C. A is highest priority, and C the lowest priority. The commander of an activity can request that his work be assigned an A priority.

(c) After priority is assigned, the work backlog is reviewed by the work center. Based on this review, a determination is made as to whether the job should be performed by in-house personnel or by contract.

(d) Work request moves on to Work Control Division where necessary vouchers are prepared for entry of the job into the Automated Data Processing (ADP) system for subsequent processing.

(e) Request is routed to Planning and Estimating (P&E) for "shot-gun" cost estimate. Requests are handled by priority on a "first come first served" basis. When "shot-gun" estimate is complete the request is returned to MCD for review, signature and return to the requester.

(f) Requester then decides if the job should be funded. When and if the funding document is received in the PWC Comptroller, he forwards to MCD a recommendation on whether to

accept or reject the funding document. Materiel are not ordered until the Comptroller accepts the funding documents.

(g) When the work is accepted, a job order is created by P&E Division and forwarded to Comptroller for assignment of job order number and request for additional funds if necessary. Job orders can be either cost reimburseable or fixed-price. The cost reimburseable provides that the PWC be reimbursed for cost over-runs. The PWC absorbs profit or loss on a fixed-price job unless there is a change in the scope of the work.

(h) Upon completion of funding and ordering of materiel, the job order is held in Work Control Division and added to the backlog of work awaiting materiel. The Material Department notifies the Work Control Division when materiel is available and the job order is transferred to backlog of work with materiel available. The job order is then loaded into the short range shop load program (three months) to be scheduled for accomplishment.

(i) The Maintenance Department scheduled the work to begin, based upon manpower availability, and at the appropriate time the materiel are drawn from the staging area (Holding Area). When the job order is completed, the unused materiel are returned to stock.

(3) In-house Inspection. Work that generates from in-house inspections will be processed according to the determination of the work classification. A large percentage of work generated by in-house inspection is minor maintenance and repair for which materiel are acquired for each individual job from shop stores or local purchases.

c. Scheduling. Scheduling provides for the accomplishment of all individual jobs except Emergency or Service Work. Preventive Maintenance Inspection/Service and repetitive work is also scheduled when it can be planned and estimated. Flexibility is necessary and is provided by a combination of Master Scheduling and Work Center Scheduling. Master Scheduling by use of a scheduling board, establishes a time for the completion of each job (specific job order) and the assignment of these jobs within the capability of the shop work force. Jobs are committed for weekly periods. A minor control board is maintained for work below the master schedule level. Work Center scheduling is used as a means for assigning craftsmen on a daily basis. The Work Center supervisor by use of a schedule board converts work for a week into a daily schedule. The first consideration for man-hours is recurring work, the second consideration is

emergency and service work and the third consideration is minor work and specific job orders. Man-hours for the third consideration are committed so that 75% are available for specific job orders and 25% for minor work. The 25% acts as a cushion which can absorb urgent jobs or unforeseen work that may arise during the work week. The craftsmen hired on a temporary basis are usually engaged in work of the specific job order class.

d. Rescheduling

Rescheduling of specific job orders is frequently necessary due to job site conditions, shortages of manpower and/or materiel, and changes in the scope of the work. Maintenance Control responds with a replacement job whenever a job in progress, or scheduled to start, is halted or not started on time. Jobs that cannot begin on the estimated starting date are discussed with the customer and usually reprogrammed. Additional man-hours are required to complete a job when it is started without all required materiel available. PWC personnel estimated that 10% to 15% additional man-hours (over basic estimate) are required for the following reasons:

(1) Making the facility operational when reaching a stopping point. Removing temporary installed equipment which might have been installed to make the facility operational.

(2) Remove equipment and materiel and cleaning up the job site. Returning the equipment and materiel to the job site at a later date.

(3) Rework of work that was previously completed.

(4) Scheduling work around materiel delivery dates.

Examples of additional man-hours requirements because materiel were not fully available when the job was started are:

— The initial estimate was for 740 man-hours to install a Garbage Sterilization Facility. The system was made operational through use of temporary piping. The temporary piping will be removed when correct materiel is received. PWC personnel estimated that an additional 80 man-hours would be required to complete this job.

— The second job was for installation of 3 each A/C Fan Coil Units. The job started with only two fans on-hand, as funds available 30 June 1975 did not permit acquisition of a third fan. PWC personnel estimated that an additional 80 man-hours would be required to install the third fan when it is received.

— The third job was for installation of a 15,000 Gallon Water Tank at Piti Power Plant. When the tank was sandblasted and primed over a year ago, the finish coat materiel was expected to be available when needed. The required materiel to finish the jobs was still not available as of 12 November 1975. The estimated additional man-hours required to restart this job when materiel is received was not available.

e. Statistics

(1) Breakdown of productive man-hours by classes of work of the PWC Maintenance Department for Fiscal Year 1975:

| | Man-Hours | Percent |
|---|---|---|
| Service Work | 85,524.5 | 15.3 |
| Emergency Service Memorandum Work | 20,478.9 | 3.7 |
| DEIS | 36,521.2 | 6.5 |
| Unestimated Work | 43,588.8 | 7.8 |
| Recurring Maintenance Work | 112,507.3 | 20.2 |
| Minor Work | 66,392.0 | 11.9 |
| Specific Job Order Work | 193,239.8 | 34.6 |
| Total | 558,252.5 | 100.0 |

(2) Estimate dollar value of PWC Maintenance Department productive work for Fiscal Year 1975 based upon an average shop cost of $18.20 per hour follows:

| | $ Value | Percent |
|---|---|---|
| Service Work | 1,556,545 | 15.3 |
| Emergency Service Memorandum Work | 372,716 | 3.7 |
| DEIS | 664,685 | 6.5 |
| Unestimated Work | 793,316 | 7.8 |
| Recurring Maintenance Work | 2,048,779 | 20.2 |
| Minor Work | 1,208,334 | 11.9 |
| Specific Job Order Work | 3,516,964 | 34.6 |
| Total | $10,161,339 | 100.0 |

2. Supply Support

a. Sources of Supply

(1) Shop Stores. Shop stores provide supply support for the PWC. The main stores upon which the PWC depends are listed below with value of inventory shown as of 31 October 1975:

| Store | Line Items | Percent | Inventory Dollar Value | Percent |
|---|---|---|---|---|
| # 1 Maintenance | 3,615 | 45.4% | $647,437 | 46.3% |
| # 3 Power | 3,369 | 42.3% | 627,033 | 44.9% |
| # 5 Communication | 375 | 4.7% | 116,278 | 8.3% |
| # 6 DMI Excess | 604 | 7.6% | 6,949 | 0.5% |
| Total | 7,963 | 100.0% | 1,397,697 | 100.0% |

Items are obtained from the stores by use of form MAR-PWC-9-4490/2 (Material Requirements Issue Document). Store stocks are bought with Navy Industrial Funds (NIF) funds and the value of stocks are charged to the respective work or job order established by the PWC Comptroller. Navy Form MAR-PWC-10-7323/1 (Material Issue List) is used to acquire supplies for emergency/service orders.

(2) Direct Material Inventory (DMI). DMI materiel and supplies are frequently acquired through local purchase for specific job orders. The items upon receipt are staged in the holding area. The DMI is bought with NIF funds and is a part of the PWC inventory. Value of the items is charged to the customer when issued for the job. Value of DMI as of 11 November 1975 was $645,571.

(3) Residual Stocks. Supplies and materiel that are left over from completed and cancelled jobs are returned to shop stores for possible future use. Craftsmen can apply these items to an authorized job order. Value of items returned is credited to the respective job order. Items are disposed of after being on-hand for 6 to 12 months. Value of items returned to shop stores during Fiscal Year 1975 follows:

| | |
|---|---|
| Shop Store # 6 | $6,999 |
| Shop Store # 1 | 47,000 |

(4) SERVMART. Supplies and materiel in limited quantities are acquired from the SERVMART. Items obtained are small quantities of hand tools, janitorial, and administrative supplies. NIF funds are used to buy the items. Information regarding line items and dollar value was not available.

(5) Bin Stocks. Pre-expended bin stocks are retained in work center areas, but number of line items and value of inventory was not available.

3. Supply Statistics

a. Bills of Materials (BOMs)

(1) Minor and specific job orders during Fiscal Year 1975 consumed the following:

| | |
|---|---|
| Man-hours | 259,632 |
| Value of man-hours ($8.27 per hr) | $2,147,157 |
| Supplies and Materiel | $2,346,477 |

(2) Minor and specific job orders on-hand with BOMs completed as of 12 November 1975:

| | |
|---|---|
| Job Orders (minor and specific) | 196 |
| Man-hours of work | 73,911 |
| Value of man-hours ($8.27 pr hr) | $611,244 |
| Supplies and Materiel | $326,684 |

b. Specific Maintenance Workload

| | |
|---|---|
| Workload as of 1 July 1974 | $3,933,753 |
| Adds: | |
| New Orders Received: | |
| PWC Customer Funded | $4,729,727 |
| PWC Job Order Funded | 618,008 |
| OICC Contract Awards Citing PWC Customer Funds which by-pass NIF accounts | 384,291 |
| | $5,732,026 |
| Total Subject Workload | $9,665,779 |
| Deduct: | |
| OICC Contract Awards Citing PWC Customer Funds which by-pass PWC NIF accounts | 384,291 |
| Completed work in contract awarded and cleared thru PWC NIF account | 1,070,215 |
| Completed in-house | 3,791,102 |
| | $5,245,608 |
| Workload balance 30 June 1975 | $4,420,171 |
| Amount of work under contract | 550,307 |
| Amount of work not under contract | 3,869,864 |
| Workload balance to 30 June 1975 | $4,420,171 |

c. Dollar value of specific maintenance workload as of 30 September 1975:

| | |
|---|---|
| Workload balance 1 July 1975 | $4,420,171 |
| Add New Orders: | |
| PWC Customer funded | 872,528 |
| PWC Job Order funded | 338,411 |
| OICC Contract Awards Acting PWC customer funds which by-pass PWC NIF accounts | 637,830 |
| | 1,848,769 |
| Work Availability | $6,268,940 |
| Deduct: | |
| OICC Contract Awards ciring PWC customer funds which by-pass PWC NIF accounts | 673,830 |
| Completed work on contract awarded and cleared thru PWC NIF accounts | 301,286 |
| Completed in-house work | 697,390 |
| | 1,636,506 |
| Workload balance 30 September 1975 | $4,632,434 |
| Contract awards for above work | $618,271 |

d. Specific maintenance shop backlog 30 September 1975:

| | |
|---|---|
| Gross maintenance backlog | $4,632,434 |
| Net maintenance backlog | 4,195,705 |
| Number of shop days gross backlog | 233 |
| Number of shop days net backlog | 211 |

## C. PWC SUPPLY ORGANIZATION

1. Supply Support to PWC Operations. Three sources were identified from which PWC craftsmen draw their materiel support:

a. Shop Stores;

b. Direct Materiel Inventory (DMI); and

c. Pre-expended bins located in the individual work centers.

2. Shop Stores

a. General. There are five shop stores located within the Operations Division of the PWC: Shop Store #1 supports maintenance; Shop Store #2 supports transportation; Shop Store #3 supports power systems; Shop Store #4 contains fuel; and, Shop Store #5 support communications.

b. Type of Materiel

Shop stores contain facilities maintenance and minor construction materiel, and repair parts for installed property (e.g., air conditioning parts, fans). Tools are not included in shop stores.

There is no unit price limitation on items placed in shop stores. There is no rule on the number of demands which automatically result in stockage, although four demands within a six month period would cause an item to be reviewed for stockage. The basic rule is that items will be stocked in shop stores if a demand can be anticipated. Stockage can be requested by the heads of the Maintenance, Utilities, or Maintenance Control Departments. Regarding items with multiple demands, the PWC computer will identify items which have received four demands within a six month period for a manual review. Such items would not be stocked if they are substitute items, or if they are readily available through local purchase on Guam. The approval of the pertinent shop is obtained before stocking any repair parts which are identified for stockage through this computer program.

Supported activities on Guam, as well as supporting PWC departments (Maintenance or Utilities) are authorized to identify critical equipments, facilities, and parts (e.g., power, ADP air conditioning, water supply). Based on this identification, supporting repair parts and assemblies will be stocked in shop stores.

c. Authorized Stock Levels

Stock levels for shop store items vary with the lead time of the item, as follows:

| Type Item | Average Lead Time | Safety Level | Operating Level | Requisitioning Objective |
|---|---|---|---|---|
| Short Lead Time | 20 | 15 | 30 | 65 |
| Regular Lead Time - Standard Items | 75 | 15 | 45 | 135 |
| Regular Lead Time - Nonstandard Items | 120 | 15 | 90 | 225 |
| Long Lead Time | 180 | 15 | 90 | 285 |
| Extra Long Lead Time | 240 | 15 | 90 | 345 |

Stock level computations are accomplished monthly by the computer service bureau operated by the Naval Supply Depot (NSD). Customer requirements are input to the NSD computer to update the PWC inventory. Stock replenishment action is taken automatically when stock level reaches the reorder point. For standard items, this results in the production of a MILSTRIP requisition, directed to NSD; for nonstandard items, the computer also produces a MILSTRIP requisition, but this is accompanied by trailer information which contains a Manufacturers Reference Number, item description, and source. This reorder action is based on the stock level held in the computer. Stock levels are recomputed monthly.

If items are not in stock or not carried, a somewhat different procedure is followed. For standard items: the item availability at NSD is checked by telephone; if available, the item is requisitioned using a manual DD Form 1348. If not available at NSD, the PWC will attempt to procure the item locally on Guam within their ordering authority of up to $250. If this cannot be done, a mechanized requisition is submitted to the NSD. For nonstandard items: the PWC will attempt to procure on Guam, within their ordering authority. If the item is not available locally, a MILSTRIP requisition, accompanied by the same trailer information described above, is forwarded to the NSD for procurement action in CONUS.

d. Funding. Materiel held by the PWC is in the NIF, having been bought out of the Navy Stock Fund.

e. Issues. The customers prepare a "Material Requirements Issue Document" to draw materiel from shop stores. The supply action is posted on this document, and this serves as input to the NSD-operated computer to update the PWC inventory records.

f. Statistics (as of 31 October 1975):

| Line Items | SS #1 | SS #3 | SS #5 | Total |
|---|---|---|---|---|
| Total | 3,615 | 3,369 | 375 | 7,359 |
| Insurance Type | (575) | (2,238) | (130) | (2,943) |
| **Inventory Value ($000)** | | | | |
| Total | $647.4 | $627.0 | $116.3 | $1,390.7 |
| Insurance Items | ($118.5) | ($326.2) | ($53.3) | ($498.0) |

3. Direct Material Inventory (DMI)

a. Type of Materiel. DMI contains materiel required to support specific job orders. There is no restrictions on the type of items it can contain, and these can range from major items to miscellaneous hardware.

b. Stock Reservation

Requirements for materiel to be positioned in DMI are established by the submission of a Material Requirements Issue Document by the Maintenance Control Department. (This same document, with the appropriate action checked, can be used to request the issue of materiel, request the positioning of materiel in DMI, or turn-in excess materiel.) This form contains: complete descriptive information for the desired item; manufacturer and part number; stock number; and, unit price.

Based on input of this Document, the computer produces a "DMI Staging Card", which identifies the desired materiel. These cards are forwarded to shop stores, where available, materiel is pulled and moved to a "Staging Warehouse". The DMI Staging Card is annotated and returned to the computer; this action drops the appropriate balance from the master inventory and records it in DMI as staged.

A daily DMI Status Report serves as the basis for controlling materiel for specific jobs. This report contains all materiel required for the job, and includes:

(1) a description of the item,

(2) for materiel which has been requisitioned from NSD, the requisition number, the Date Materiel Required, Issue Priority Designator, and quantity and extended dollar value requested.

(3) quantity and extended value of the item actually staged in the DMI Warehouse; and,

(4) quantity and extended value of the item actually issued to shops.

The DMI Status Report as of 6 November 1975, contained 18,458 records. It also showed that $3.6 million of materiel had been requested, $743,300 had been staged, and $1.5 million had been issued.

c. Funding. The DMI is carried in the NIF. When drawn from DMI and issued to the job, the NIF is reimbursed from the customer's Operations & Maintenance (O&M) funds.

d. Issues. Shop scheduling is provided a listing of specific jobs for which the required materiel has been assembled so that the job may be scheduled. When work is to begin, the craft shop picks up required materiel from the DMI Warehouse, using a copy of the Material Requirements Issue Document as their request document.

e. Excesses. Materiel obtained to support a specific job is intended to be turned in after completion of that job. If excess materiel is usable within shop stores, the customer receives credit for the excess. A segregated storage area, identified as Shop Store #6, contains materiel which is excess to DMI. Standard stock items (i.e., items assigned National Stock Numbers (NSNs)) are sent to the NSD for reissue; nonstandard items are sent to the customer or to the appropriate maintenance shop for use -- if none can be identified, the property is turned-in to property disposal.

4. Pre-Expended Bins

a. Type of Materiel. Items in pre-expended bins must have a unit price of $5 or less, and have a high usage, with over half of the total issues as over-the-counter transactions.

b. Authorized Stock Level. These items are authorized a 30-day stockage objective. The reorder point was identified as being a matter of shop supervisor judgement.

c. Stock Replenishment. A pre-expended bins listing identifies high and low limits for each item, and a weekly review identifies items requiring replenishment. Materiel is drawn from Shop Store #1 to replenish pre-expended bins. However, not all pre-expended bin items are carried in Shop Store #1 -- items which are stocked by NSD or are available on the local purchase market on Guam are generally not carried in Shop Store #1 to back-up the pre-expended bins. The incidence of this varied by shop; for example, 170 of the 198 items in the Machine Shop pre-expended bin were not carried in Shop Store #1.

d. Funding. These stocks are funded by NIF. These bins are absorbed as overhead expense, and no attempt is made to charge usage to customer accounts or any specific job order.

e. Issues. Craftsmen draw materiel from the pre-expended bins as required, with no documentation or controls.

f. Excesses. Excessing actions are taken based on observations by the supply clerk that items have not been demanded as there are no records or formal program in this area. No excessing actions had occurred for two years.

g. Statistics. Pre-expended bins were established in eight different craft shop locations (e.g., welding shop, machine shop, carpenter shop, electrical shop). There were a total of 632 items identified in these pre-expended bins.

5. Central Supply Sources

a. General.

The NSD Guam serves as the source of supply for all materiel used by the PWC. All materiel is obtained through the NSD, although actual receipts may take one of the following routes:

(1) receipt from NSD stocks;

(2) direct receipt from the Naval Supply Center (NSC), Oakland;

(3) direct receipt from a CONUS inventory control point, such as a Defense Supply Center; or

(4) direct order by authorized PWC personnel from a local purchase source on Guam, under an ordering arrangement or contract arranged by the NSD.

For the first quarter of Fiscal Year 1976, support to PWC was received as follows:

Standard Items

| | |
|---|---|
| NSD Guam | 37.8% |
| CONUS (via NSD) | 14.6% |
| | 52.4% |

Nonstandard Items

| | |
|---|---|
| NSD Guam (purchase over the PWC $250 authority) | 2.4% |
| PWC Guam (using NSD BPAs) | 40.2% |
| CONUS (via NSD) | 4.6% |
| Regional Officer in Charge of Construction, Pacific | .4% |
| | 47.6% |

b. Standard Item Requisitioning. PWC requirements for standard items (those assigned NSNs) are submitted to NSD on MILSTRIP requisitions. These are processed through the NSD computer and issued if available. If the requirement is high priority (Issue Priority Group (IPG) I or II) or the item is not carried by NSD, the requisition is passed to the appropriate source. If a low priority requirement and NSD has a due-in, the PWC requisition will be placed on back order. (If the requirement is passed, PWC is notified and any subsequent follow-up/status actions are directly between PWC and the supplying activity.)

c. Nonstandard Item Requisitioning. Requirements for non-standard items are submitted on a NAVFAC form, "Material Requisition", which is a manual document containing space for item description and source identification. These requirements are processed through the NSD Technical Department in an attempt to identify an NSN. If this cannot be done, the NSD Purchase Department will attempt to buy the item locally. If a local source cannot be identified, the buy requirement will be passed to NSC Oakland; IPG I requirements are passed by message, while the NAVFAC requisition submitted by PWC is passed by mail for IPG II and III requirements.

d. NSD Stockage. Basically, NSD Guam stocks only standard items -- i.e., those with an NSN. As of the Team visit, a total of 14 nonstandard items has been authorized by a NAVSUP instruction to be carried, and most of these were for Project New Life (the Viet Nam refugee project). Three demands in six months are required for an item to be stocked; and NSD will record demands for non-carried items, with a monthly review to identify those which should be considered for stockage. If an item falls below the three demands in six months criteria, it is reviewed for possible elimination from stockage.

e. NSD Stock Levels. NSD Guam levels are based on the Navy Variable Operating and Safety Level (VOSL) concept, with the criteria and rules used in the computation based on factors furnished to the NSD by the Fleet Material Support Office. NSD Guam is authorized a maximum stockage objective of nine months, with a 4½ month average inventory. Authorized levels are recomputed quarterly.

f. NSD Stock Replenishment. When processing requisitions, the NSD computer automatically identifies items which have reached their reorder point. A weekly run produces requisitions to the appropriate supply sources for each of the items which has reached its reorder point. There is a mandatory review of these requisitions, with the review level varying with the value of the requirement -- for example, requirements over $2,000 require approval of the head of the Inventory Control Department. As of the Study Team visit, NSD

Guam was testing a procedure under which NSD stock replenishment requirements for integrated manager items would be sent directly to the managing inventory control point, rather than to NSC Oakland.

g. NSD Funding. Materiel held by NSD Guam is in the Navy Stock Fund, and there is a buy-sell relationship between the NSD and the PWC. If materiel required of the NSD is carried but not in stock, the NSD stock fund are cited on customer requisitions for Defense Supply Agency (DSA)/General Services Administration (GSA)/local purchase materiel passed to NSC Oakland; if required materiel is not carried by NSD, customer funds are used for the passed requisition. NSD Guam reported that they had never yet been in the position where they had no funds available to requisition required materiel; they advised that they would cite customer funds to meet customer requirements if this situation were to arise.

## D. PWC PROCUREMENT

1. Local Purchase Criteria. The Technical Branch orders materiel for a specific job. If the materiel is not in the shop store, and not available in the NSD, a purchase is made against a BPA if it is below $250. Purchases above $250 are referred to the NSD for action. In these cases, the NSD makes purchases up to $500 without competition and from $500 to $5,000 with competition. The NSD also uses Purchase Orders (POs) for purchases above $5,000 or in lesser amounts when a written purchase instrument is required or desired. Delivery Orders (DOs) are also used by the NSD for established contracts such as GSA schedules or Buy United States Here (BUSH) contracts. BUSH contracts are used only if competition proves them more beneficial to the Government than non-BUSH contractors. If materiel is not available on the island, the requisition is referred to NSC Oakland for action.

2. Local Purchase Costs

Personnel within the Material Department involved in making BPA purchase spend only part of their time making purchases. The number, grade, percent of involvement, and annual salary based on the percent of involvement follows:

| Number | Grade-Step | Percent of Involvement | *Salary |
|---|---|---|---|
| 1 | GS-09-09 | 90% | $14,638 |
| 1 | GS-09-05 | 50% | 7,276 |
| 1 | GS-07-02 | 90% | 9,784 |
| 1 | GS-07-01 | 50% | 5,260 |
| 1 | GS-07-10 | 50% | 6,840 |
| 1 | GS-05-04 | 10% | 935 |
| | | | $44,733 |

* Based on 1 October 1974 GS pay scale and does not include Cost of Living Allowances.

In addition, a person from the Transportation Department devotes full time to picking up materials from local vendors, and a person from the Comptroller Journal Accounting Division spends 80% of his time making payments for BPA purchases. The number, grades, percent of involvement, and salary paid based on the percent of involvement follows:

| Number | Grade | Percent of Involvement | Salary |
|---|---|---|---|
| 1 | WG-7 | 100 | $12,106 |
| 1 | GS-4 | 80 | 6,886 |
| | | TOTAL | $18,992 |

(Personnel in the NSD also get involved with local purchase for the PWC, but the amount of involvement could not be determined.)

The total personnel cost for the supplies purchased by the Material Department of the PWC is:

| | |
|---|---|
| $44,733 | Material Department |
| 12,106 | Transportation Department |
| 6,886 | Comptroller |
| $63,725 | Total |

3. Local Purchase Techniques

Before making a BPA purchase, the Technical Branch checks the shop store, and the NSD if the item is a Nationally Stock Numbered item. In emergencies, a check by telephone of the Ship Repair Facility and/or Andersen Air Force Base is made for availability of a required item. When a BPA call is made, the person making the pick-up is informed of the BPA call number which authorizes the pick-up. With this authority he picks up the item(s) and returns to the PWC where necessary paperwork is prepared for distribution to offices requiring copies.

When a customer requests work from the PWC, he provides the necessary funds to do the work as estimated by the PWC. Funds for supplies needed to accomplish the work are included in the estimate. When a BPA purchase is made, customer funds are used to pay for it.

Local purchase of items that are normally obtained from central sources (NSC Oakland, DSA/GSA) takes place if, after ordering from central sources, the item is not received, or will not be received by the required delivery date. In these cases, an attempt is made to cancel the requisition from the central source. If the requisition cannot be cancelled, the item, when received, is placed in the PWC's segregated storage and used to satisfy future requirements.

Some items are delivered by vendors, but most of the items purchased under BPAs are picked up by Transportation Department personnel. These BPA transactions are made with any of 104 vendors with whom the NSD Purchasing Division has established agreements. A sampling of 140 BPA transactions with five different vendors revealed that it took an average of 4.03 days to receive an item of supply from the time the call was made.

4. Magnitude of Operation. In Fiscal Year 1975, 8,866 BPA transactions valued at $645,499 were processed by the Material Department for immediate requirements and for shop store stock. Approximately 1,000 of the transactions valued at $60,000 were for the shop store stock replenishment. Dollar volume of purchases by the NSD (over $250) in behalf of the PWC could not be identified. However, the number of purchase transactions processed by the NSD for the PWC was 1,640. These transactions included those processed by the NSD to local sources CONUS and Officer in Charge of Construction (OICC) Pacific. The volume of local purchase transactions processed by all source in behalf of the PWC follows:

| Local Purchase Activity | Number Requests | % of Total |
|---|---|---|
| NSD | 526 | 5.0 |
| PWC | 8,866 | 84.4 |
| CONUS (NSC Oakland) | 1,019 | 9.7 |
| Officer in Charge of Construction (Pacific) | 95 | 0.9 |
| Total | 10,506 | 100.0 |

The volume and types of procurement done by the NSD purchasing function in Fiscal Year 1975 for all Navy activities on Guam were as follows:

| | | |
|---|---|---|
| Purchase Orders | 3,271 | $2,015,000 |
| BPA Calls | 956 | 420,000 |
| Imprest Fund | 362 | 20,000 |
| Orders under $1,000 | 3,702 | 1,908,000 |
| Major Purchases | 51 | 983,000 |
| Modifications | 6 | (- 26,000) |
| *Placed Outside of NSD | 16,175 | 1,178,000 |
| | 24,523 | $6,498,000 |

* The purchases placed outside of NSD include the purchases (8,866 BPA transactions valued at $645,499) processed by the PWC Material Department.

E. INDIVIDUAL ITEM RESEARCH

Six items of supply delayed the following five work orders from being accomplished. Research providing the following information:

1. Work Order 1311084 was delayed for lack of Piling, NSN 5510-00-260-5934. Item was ordered by NSD from S9C on 4 September 1974. Status from S9C advised the piling was shipped, but as of 11 November 1975, pilings had not been received by PWC Guam.

2. Work Order 1317151 was delayed for lack of two (2) items. A Photo Electric Control was ordered by NSD on 3 October 1974. Records indicate the control was received and place in DMI holding area to await scheduling into work, however the control cannot be located. The BOM will be re-inventoried to locate missing item. If not found, the item will be reordered.

A Contractor Magnetic Relay was ordered by NSD on 3 October 1974 and then reordered 27 May 1975. The requisition was passed to NSC Oakland on 29 October 1975. No additional status available on the item.

3. Work Order 1504304 was delayed for lack of Cap Screw, NSN 5305-00-958-9953, which was ordered by NSD on 29 November 1974 and reordered on 23 June 1975. Status received by PWC Guam indicates item will be shipped from the vendor on 18 February 1976 under new NSN 5307-00-248-8002.

4. Work Order 1620573 was delayed for lack of Terminal Boxes requisitioned 7 November 1974 from NSC Oakland. NSC let a contract which could not be located. The materiel-in-transit file was to be reviewed and if item could not be located, a new requisition was to be submitted.

5. Work Order 1620619 was delayed for lack of 224 rolls of Roofing Felt, NSN 5650-00-270-1483, ordered by NSD on 12 December 1974. Only 124 of the total have been received. Records do not indicate that the 100 rolls remaining on the order will be received. Reorder action will be taken.

# CHAPTER X

# CARSWELL AIR FORCE BASE, TEXAS

## A. MANAGEMENT DATA

### 1. Base Civil Engineer Organization

The Base Civil Engineer (BCE), Carswell Air Force Base, Texas as of 22 September 1975 was authorized personnel spaces as indicated below:

| | Authorized | Assigned |
|---|---|---|
| Officers | 9 | 10 |
| Enlisted | 198 | 196 |
| Civilians | 200 | 189 |
| Total | 407 | 395 |

The BCE organization is shown in Figure X-1.

### 2. Base Supply

a. Organization. The Base Supply is known within the Air Force as the Standard Base Supply System (SBSS). All organizations at a base draw supplies from the SBSS. The only exceptions are those Civil Engineer (CE) organizations having authority to draw from a Contractor-Operated Civil Engineer Supply Store (COCESS) which will be discussed later. Since the SBSS operates a revolving stock fund, organizations drawing supplies from the SBSS must reimburse the stock fund with Operations & Maintenance (O&M) funds. Sales of items to customers allow the stock fund to place requisitions on supply sources to satisfy demands of customers and replenish stocks. On occasion, the stock fund has the maximum amounts which it can have on order or on hand. In these circumstances, even if organizations have O&M funds available, they cannot request required supplies unless the stocks are available in the stock fund for immediate sale. During these periods, the stock fund must employ selective requisitioning practices which can have a detrimental effect on support to customers. The organization structure shown in Figure X-2 is used to operate the SBSS and the stock fund.

b. Manning. The organization's Chief of Supply is a Lieutenant Colonel, and the assistant is a GS-12. The branches are manned as follows:



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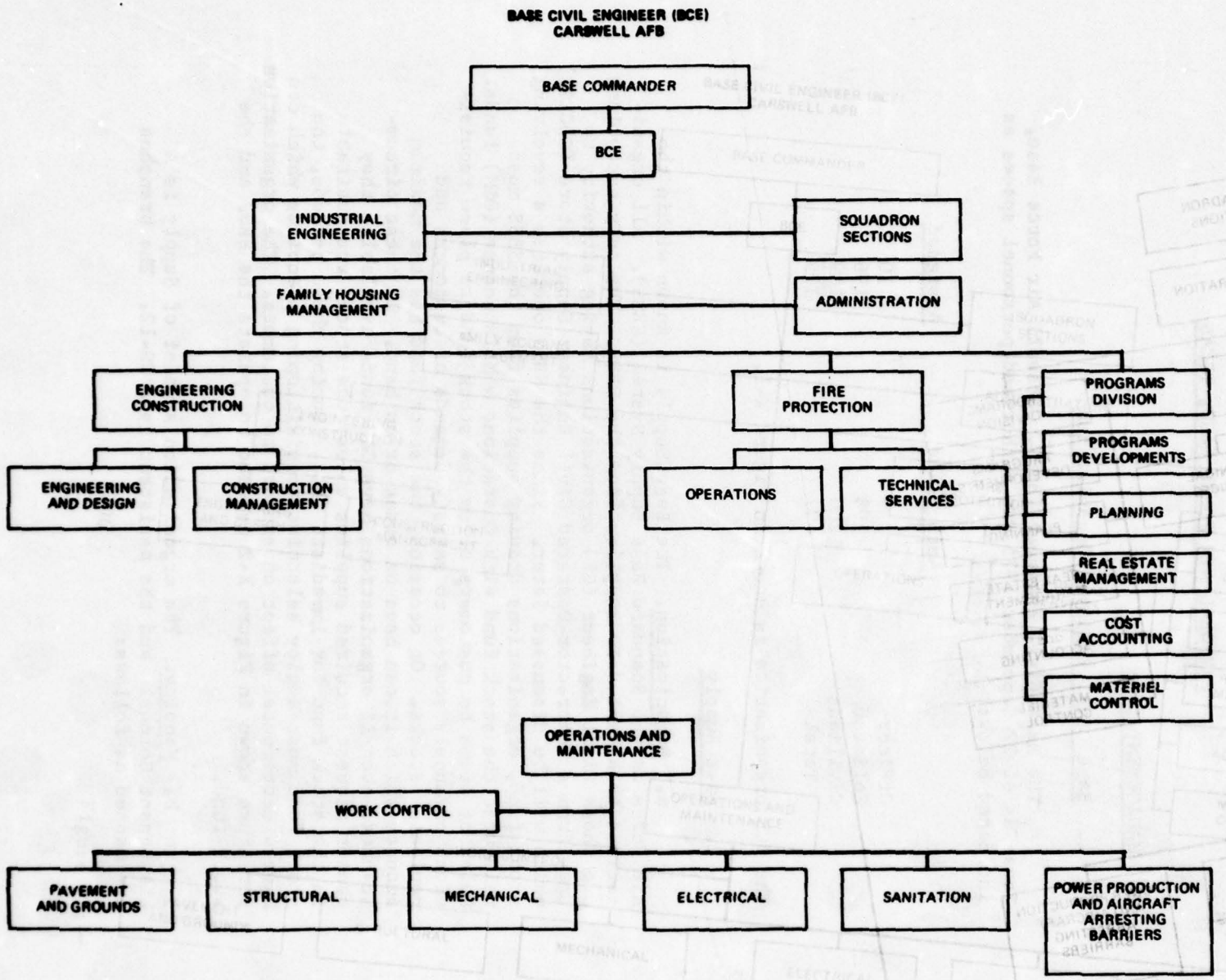
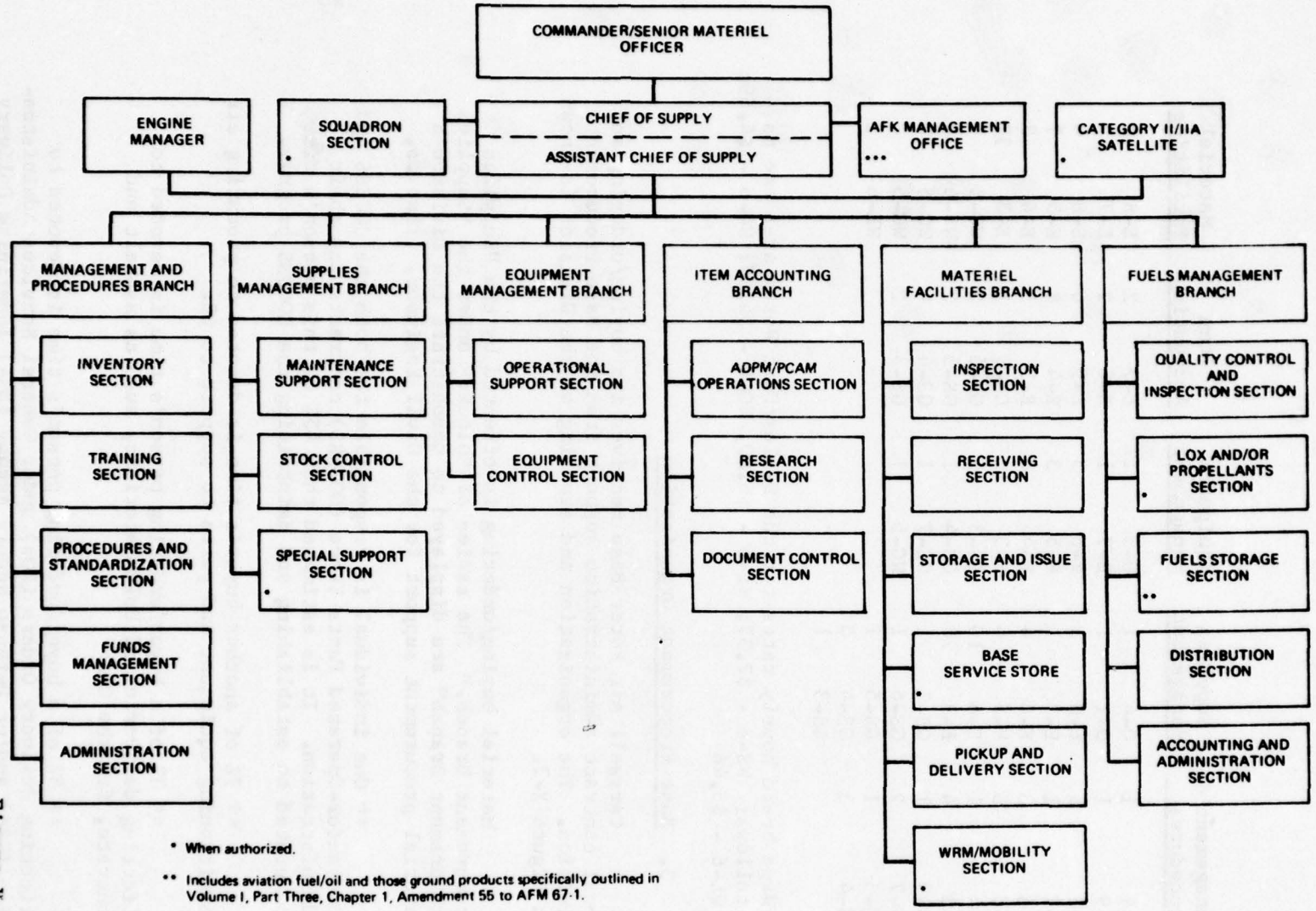

BASE CIVIL ENGINEER (BCE)
CARSWELL AFB
BASE COMMANDER
BCE
INDUSTRIAL ENGINEERING
SQUADRON SECTIONS
FAMILY HOUSING MANAGEMENT
ADMINISTRATION
ENGINEERING CONSTRUCTION
FIRE PROTECTION
PROGRAMS DIVISION
PROGRAMS DEVELOPMENTS
PLANNING
REAL ESTATE MANAGEMENT
COST ACCOUNTING
MATERIEL CONTROL
ENGINEERING AND DESIGN
CONSTRUCTION MANAGEMENT
OPERATIONS
TECHNICAL SERVICES
OPERATIONS AND MAINTENANCE
WORK CONTROL
PAVEMENT AND GROUNDS
STRUCTURAL
MECHANICAL
ELECTRICAL
SANITATION
POWER PRODUCTION AND AIRCRAFT ARRESTING BARRIERS

Figure X-1

## CARSWELL AFB




* When authorized.

** Includes aviation fuel/oil and those ground products specifically outlined in Volume I, Part Three, Chapter 1, Amendment 55 to AFM 67-1.

*** Authorized only when AFK account is officially designated and when it is not assigned to another base organization.

Figure X-2

| Management & Procedures | | Supplies Management | | Equipment Management | | Item Accounting | | Materiel Facilities | |
|---|---|---|---|---|---|---|---|---|---|
| O-4 | 1 | O-4 | 1 | O-3 | 1 | E-7 | 2 | E-8 | 1 |
| E-9 | 1 | O-1 | 1 | E-7 | 1 | E-6 | 2 | E-7 | 2 |
| E-8 | 1 | E-8 | 1 | E-6 | 3 | E-5 | 6 | E-6 | 4 |
| E-7 | 1 | E-7 | 1 | E-5 | 3 | E-4 | 8 | E-5 | 7 |
| E-6 | 3 | E-6 | 4 | E-4 | 8 | E-3 | 5 | E-4 | 7 |
| E-5 | 5 | E-5 | 4 | E-3 | 12 | GS-9 | 1 | E-3 | 37 |
| E-4 | 1 | E-4 | 10 | GS-3 | 1 | GS-6 | 2 | WG-8 | 1 |
| E-3 | 4 | E-3 | 28 | GS-4 | 1 | GS-5 | 2 | *WS-6 | 4 |
| GS-9 | 1 | GS-7 | 1 | GS-7 | 1 | GS-4 | 4 | WG-6 | 10 |
| GS-7 | 2 | GS-6 | 1 | WG-5 | 1 | GS-3 | 2 | WG-5 | 1 |
| GS-5 | 1 | GS-5 | 1 | | | | | WL-6 | 2 |
| GS-4 | 3 | GS-4 | 5 | | | | | | |
| | | GS-3 | 1 | | | | | | |

* Wage board hourly rates for the Dallas/Fort Worth area are as follows: WS-8 - $7.37; WS-6 - $6.80; WG-6 - $4.97; WG-5 - $4.69; WL-6 - $5.46

3. Base Procurement Organization

Carswell Air Force Base receives its buying/ordering and local contract administration support from the Base Procurement Division. The organization and staffing of the Division is shown in Figure X-3.

Materiel buying/ordering is effected by the "Supplies Procurement Branch." The series of "blocks" under the "Supplies Procurement Branch" are displayed to demonstrate the Division's materiel procurement support for the Civil Engineer. That is,

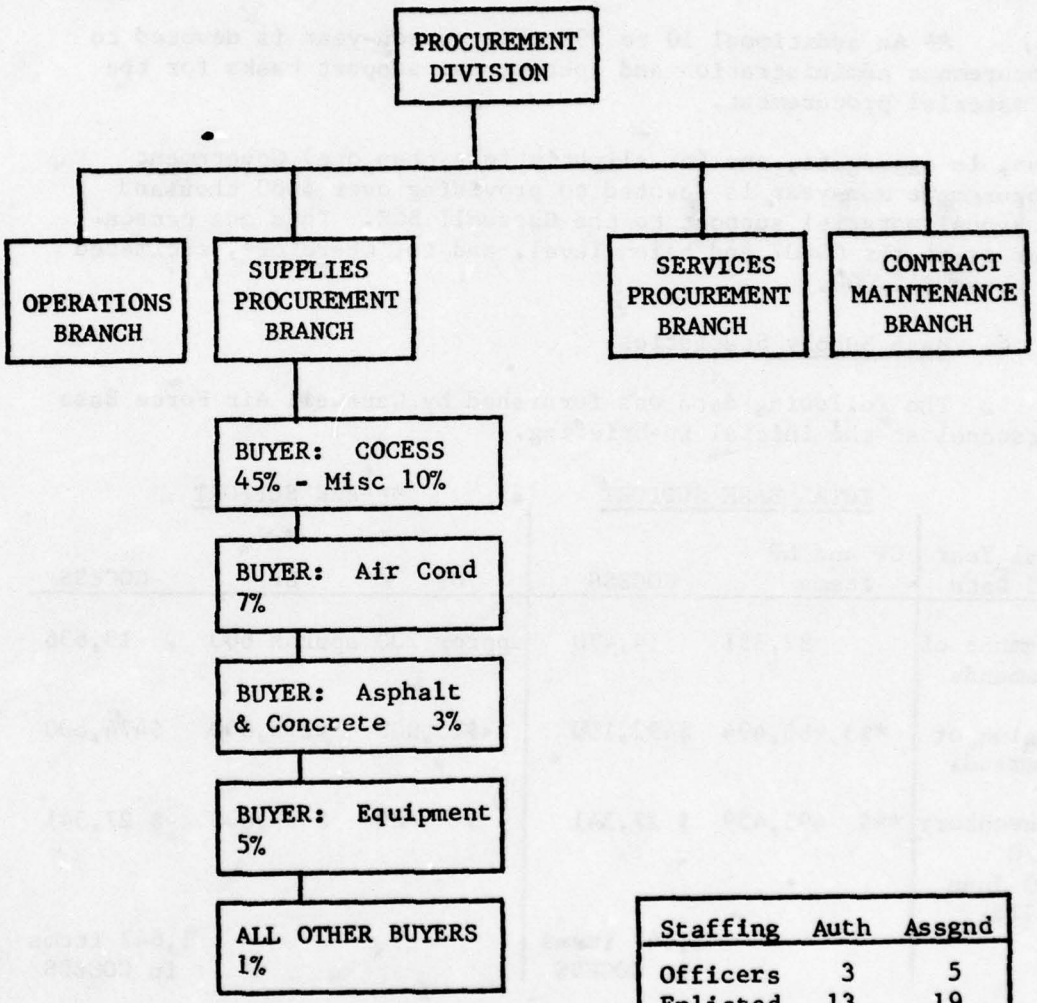
** One individual is responsible for both the COCESS and Contractor-Operated Parts Store (COPARS) contracts and their administration. It is estimated that 45% of this person's time is devoted to establishing and maintaining the COCESS program.

** 7% of another buyer's time is devoted to procuring air conditioning equipment and parts to support to CE.

** 3% of a buyer/ordering person's time is devoted to effecting deliveries of bulk materials, such as asphalt and concrete, for the CE.

** 5% of a buyer/ordering person's time is devoted to effecting Delivery Orders (DOs) under General Services Administration (GSA) and/or Defense Supply Agency (DSA) Indefinite Delivery Type Contracts (IDTCs).

## BASE PROCUREMENT DIVISION
## CARSWELL AIR FORCE BASE




| Staffing | Auth | Assgnd |
|---|---|---|
| Officers | 3 | 5 |
| Enlisted | 13 | 19 |
| Civilian | 15 | 13 |
| Total | 31 | 37 |

Figure X-3

** 1% of person-year is devoted to local purchase of "other" CE support items based on Base Supply initiated purchase orders.

** An additional 10 to 20% of a person-year is devoted to procurement administration and operational support tasks for the CE materiel procurement.

Thus, in aggregate, one (or slightly less than one) Government procurement man-year is devoted to providing over $630 thousand in annual materiel support to the Carswell BCE. This one person-year is at the GS-07 and below level, and is, therefore, estimated at about $12,000.

4. Base Supply Statistics.

The following data was furnished by Carswell Air Force Base personnel at the initial in-briefing.

| | TOTAL BASE SUPPORT | | ***BCE SUPPORT | | |
|---|---|---|---|---|---|
| Fiscal Year 1975 Data | CP and LP Items | COCESS | CP | LP | COCESS |
| 1. Number of Demands | 82,351 | 14,470 | approx 200 | approx 600 | 13,636 |
| 2. Value of Demands | *$3,965,494 | $492,100 | $15,000 | $275,000 | $474,800 |
| 3. Inventory A/O 30 June 1975 | **$ 495,459 | $ 27,341 | $ 700 | $ 35,000 | $ 27,341 |
| | | 1,647 items in COCESS | | | 1,647 items in COCESS |

* Dollar Value of Net Issue. (Does not include value of ALL demands. For example, cancellations and due outs remaining on order at the end-of-year are not included. Includes tool issues, personal equipment items and fuel oil.)

** General System Description (GSD) Inventory Only.

*** Does not include tool issues, personnel equipment items, fuel POL, or aviation POL for Fire Department use.

NOTE: In terms of quantities: 80% of Carswell Air Force Base's items are bought through COCESS; 15% through local purchase; 5% from GSA schedules.

The difference in the number of demands and value of demands shown for the COCESS under the Total Base Support column as compared to those under the BCE support column represents the amounts drawn from COCESS by organizations other than the BCE.

The following figures were obtained from the Stock Fund Inventory Management Report (R-13) dated 30 June 1975. General Support Division and Systems Support Division are shown individually and totally to illustrate the volume of business done by base supply with its customer orgnnizations.

General Support Division

| | |
|---|---|
| $ 495,459 | Total Inventory on hand (End of period (EOP)) |
| 4,132,753 | Issues/Sales (gross) |
| 4,075,458 | Receipts from Procurement Sources |
| 53,123 | Receipts from Capitalized Accounts |

Systems Support Division

| | |
|---|---|
| $ 656,262 | Total Inventory on hand (EOP) |
| 2,271,411 | Issues/Sales (gross) |
| 2,393 | Receipts from Procurement Sources |
| 2,506,427 | Receipts from Capitalized Accounts |

Total (Both Divisions Stock Fund)

| | |
|---|---|
| $1,151,721 | Total Inventory on hand (EOP) |
| 6,404,164 | Issues/Sales (gross) |
| 4,077,851 | Receipts from Procurement Sources |
| 2,559,550 | Receipts from Capitalized Accounts |
| (6,637,401) | (Total Receipts) |

Using the above amounts, the total volume of activity by Central Procurement (CP), Local Purchase (LP) GSA for the installation and the CE is as follows:

| | CP | LP | GSA | NOTES |
|---|---|---|---|---|
| Total Line Items (As of 30 June) | 30,930 | 2,000 | 3,000 | 1 |
| Facilities Engineer (FE) | 17 | 18 | 12 | 2 |
| Value of Annual Demand (VAD) Fiscal Year 1975 | $4,675,040 | $1,024,666 | $704,458 | 1 |
| FE | $ 50,000 | $ 237,300 | $ 29,100 | 3 |
| Total Value of Inventory as of 30 June 1975 | $ 840,756 | 184,276 | 126,689 | 1 |
| FE | 500 | 35,000 | 200 | 3 |
| Value of Fiscal Year 1975 Procurement | $4,845,303 | $1,061,984 | $730,114 | 1 |
| FE | $ 50,000 | $ 237,300 | $ 29,100 | 3 |

NOTE 1: The total line items quantity (35,930) was extracted from the Monthly Supply/Equipment Management Data Report (M-32), dated 30 June 1975. The breakout by CP, LP, and GSA is based on an estimated that CP sources represent 73% of the total, while GSA and local purchase represent 11% and 16% respectively. These percentages were applied to all installation total amounts.

NOTE 2: The number of line items is based on the number of bench stock line items and the number of issue expection code G items in the computer stock record (i.e., these represent items purchased outside the COCESS).

NOTE 3: These breakouts are based on estimates that 75% of the CE expenditures through central installation supply are for LP materiel. Of the remainder, 16% is estimated to be CP and 9% GSA.

B. BASE CIVIL ENGINEER DATA

1. Functions and Operations

a. Type of Work. The BCE operates the utility systems and provides general maintenance for the installation installed equipment,

utility systems, and real property. Services include grass cutting, refuse collection, clearing of storm drains, patching streets, and providing fire protection.

b. Workload Generation: Work falls into general classes which are as follows:

(1) Service Calls--Work that is considered to be an emergency and needs immediate attention.

(2) Recurring Maintenance--Work that can be pre-identified and should be performed at designated intervals, e.g., once a year, for installation facilities, systems, and equipment.

(3) Direct Scheduled Work--Work that is received, consolidated, estimated, and scheduled for accomplishment. Direct scheduled work includes the following:

(a) Fast Action Service Technique (FAST)--The FAST method applies to urgent, but not emergency, work that will not exceed two man-hours per trade. FAST work is received, consolidated, and assigned for accomplishment within five days.

(b) Hopper Technique--Work that is not eligible for FAST classification or inclusion in the In-Service Work Plan (IWP)or is not identified for accomplishment by a Structural Maintenance and Repair Team (SMART). Hopper work is collected and held for a specified period of time and once every month the jobs are grouped and sent to the work controller. Under the Hopper technique the installation is divided into zones and periodically (about 28 days) the work is accomplished.

(c) Structural Maintenance and Repair Team--Work that entails the capability of several crafts to perform minor maintenance and repair on a recurring basis. Work is pre-identified by an inspection schedule.

(d) In-Service Work Plan--Work that requires a large effort but can be held for accomplishment at a later time. IWP work may require extensive planning or interface with other shops and may be held and grouped with other work orders or job orders to make the best use of resources.

(4) Work Orders--A work authorization document for work that is separately identifiable, requires considerable planning, ordering of materiel and possibly interfaces of two or more shops,

and frequently has a high dollar cost. The IWP is the primary control of work order processing.

(5) Job Orders--A document used to authorize simple work that usually involves one shop. Most job orders of a routine nature are processed under the control of the IWP. Other job orders may be processed under the control of service call, FAST, or the Hopper technique.

c. Scheduling

Work is scheduled according to priority of the job to be accomplished. Priorities and percentage of manpower expended for different types of work as as follows:

| Priority | Type of Work | % of Man-hours |
|---|---|---|
| 1 | Operation and Service | 26.7 |
| 2 | Service Calls | 4.0 |
| 3 | Equipment Maintenance | 17.0 |
| 4 | Housing Blitz | 1.2 |
| 5 | Direct Scheduled Job Orders | 24.4 |
| 6 | IWP Job Orders | 18.7 |
| 7 | Separate Identifiable Work Orders | 8.0 |
| | TOTAL | 100.0% |

During Fiscal Year 1975 it was reported that a total of 331,025 man-hours were expended for production-type work. Generally separate identifiable work is not scheduled until materiel is available and in the holding area. Planner determines man-hours required six months in advance of the accomplishment of the work. As of the time of the team visit, Carswell Air Force Base had work planned through March 1976.

d. Rescheduling. Rescheduling of separately identifiable work orders may become necessary because of command interest, materiel not available when required, or insufficient man-hours available. Command interest work is expedited to the fullest extent possible. Work orders that are delayed because of materiel or man-hours are deferred until a future month. Work orders are delayed more frequently for lack of materiel ordered from base supply than COCESS. Base supply obtains the high cost, difficult to find items, whereas, COCESS carries the low cost items that seldom result in a work deferment. "Off-hand" estimate by BCE personnel was the about ten percent of the separately identifiable work orders must be rescheduled.

2. Supply Support. The Base Civil Engineering Organization has an in-house supply section of seven authorized personnel of which six are filled.

Authorized Personnel Spaces

| | Military | Civilian |
|---|---|---|
| Chief Materiel Control | 1 | |
| Inventory Management Specialist | 4 | |
| Warehouseman | 1 | 1 |
| TOTAL | 6 | 1 |

a. Supply Sources

(1) Contractor Operated Civil Engineering Supply Store where no form is required to draw supplies from the COCESS bench stock. The COCESS returns sales slips of the items purchased daily. The COCESS sales slips (25 to 30 daily) contain on the average ten items. BCE has no inventory investment in the supplies until drawn from the COCESS.

(2) Base Supply from which larger or unique items (not available from the COCESS) are drawn. To obtain supplies a DD Form 1348-6 or AF Form 2005 is submitted to base supply. Response time, depending upon the item, can extend to 120 days.

(3) Bulk Issue from Base Supply--The BCE maintains an inventory of lumber, plywood, sand, herbicide and insecticide acquired from base supply.

(4) Residual Area--Supplies and materiel that are left over from jobs are accumulated and held for possible future use. Craftsmen can apply these items to an authorized work order. Supplies in the residual area have an estimated value of about $9,000.

(5) Contractor Operated Parts Stores--Repair parts for vehicles and ground equipment are acquired from COPARS; these parts have an estimated value of $400 per month.

(6) Holding Area--The holding area is a repository for items drawn from COCESS and base supply (including local purchase) that are to be consumed as an item for a Bill of Materials (BOM) pertaining to a specific work order. Discussion indicated that present value of supplies in the BCE Holding Area is $35,000.

Holding Area items are covered by a voucher of items for a specific job. Supplies are released when the appropriate workman signs a card for the order.

b. Stock Levels and Stock Replenishment--The BCE makes an estimate of known requirements for the next 90 days. Bench stock levels maintained by the COCESS contractor are based upon prior consumption. The COCESS contractor, Consolidated Supply Company, replenishes stock from its source in Blytheville, Arkansas. Items required from installation supply are ordered on DD Form 1348.

c. Funding--The BCE is authorized by the funds manager to spend approximately $36,000 per month for COCESS supplies. Stock funds are reimbursed by O&M funds when items are issued from installation supply. Jobs may have to be deferred when funds become temporarily exhausted.

d. Issues--The COCESS bench stock is located in the BCE work area. No form is required to draw items from the COCESS. The items issued are listed on a sales slip which is forwarded to the BCE on a daily basis. Items listed on the COCESS Materiel Requirements List (MRL) are available over the counter and delivered within one day. Items required from installation supply, if not on hand, and urgently required, are procured locally. Base supply authorizes BCE to go to procurement.

e. Bills of Materials--When approved and funded BOMs for special work orders and/or planned jobs are processed for supply action as follows:

(1) AF Form 1445 (Materials and Equipment List) is given to COCESS with a required date for supplies. COCESS returns form to BCE with an estimated delivery date and indication as to when items should be ordered.

(2) AF Form 1445 is forwarded to base supply, where research is made of the requirements and the BCE is advised accordingly.

(3) Depending on stock availability COCESS items may or may not be withdrawn and placed in the holding area. Available stocks from base supply are issued to the BCE and placed in the holding area until required.

f. Excesses--Excess materiel is held in the residual area for approximately six months for possible use. Items remaining after the holding period are turned in to base supply for disposition.

Dollar value of these supplies is frequently lost. During Fiscal Year 1975 returns to supply were as follows:

| | |
|---|---|
| Fire Department Foam | $18,620 |
| Other supplies | 5,145 |
| TOTAL | $23,765 |

3. COCESS. COCESS is considered by the BCE to be a responsive source of supply as four or more months were frequently required to obtain supplies through Base Supply. COCESS provides many items over the counter and two months or less for items more difficult to obtain. COCESS has been in existence at Carswell Air Force Base for three years with the same contractor, Consolidated Supply Company, Blytheville, Arkansas. COCESS reduces manpower requirements for BCE. One issue point provided most supply items with BCE business estimated to be $500,000 for Fiscal Year 1975.

4. Work Orders Requiring BOMs.

Presently there are 201 work orders that will include a BOM. A resume of the work orders from a materiel availability point of view is provided below. The column shown as "other" are those work orders that require funding, planning, additional technical review or approval.

| | Total | BOM Complete | BOM Incomplete | Other |
|---|---|---|---|---|
| September 1975 | 22 | 14 | 1 | 7 |
| October 1975 | 18 | 14 | 4 | - |
| November 1975 | 15 | 4 | 10 | 1 |
| December 1975 | 19 | 9 | 5 | 5 |
| January 1976 | 16 | 2 | 5 | 9 |
| February 1976 | 19 | - | - | 19 |
| March 1976 | 22 | - | - | 22 |
| Other | 70 | 5 | 3 | 62 |
| TOTAL | 201 | 48 | 28 | 125 |

The work orders may, or may not, be completed in the period shown. Reasons for rescheduling could be lack of materiel, insufficient man-hours or some other factor. Work orders that fall behind are rescheduled for a later date unless they have a high priority and must be expedited.

General steps for processing a work order requiring a BOM are as follows:

(1) AF Form 332 (Work Request) is prepared.

(2) AF Form 327 (Base Civil Engineer Work Order) is prepared.

(3) Planner/estimator provides an estimate of cost for the work to be done.

(4) Job goes before the Facilities Board. (Base Commander chairs the meeting.)

(5) Job, if approved, is returned to planner for detailed planning and preparation of AF Form 1445 (Materials and Equipment List).

(6) Job is placed on the schedule for completion six months after approval.

(7) Five months prior to scheduled completion the job is considered for funding.

(8) The job must be planned and funded and materiel is to be ordered four months before scheduled completion.

(9) Third, second, and first month, waits its turn unless assigned a higher priority.

C. BASE SUPPLY

1. Supply Support to the Base Civil Engineer.

The BCE draws supplies from several sources within the confines of Carswell Air Force Base. These sources are: Base Supply, bench stock, Defense Property Disposal Office, Bills of Materials, Residual Holding Area, and COCESS.

(1) Base Supply. Supplies drawn from Base Supply are those items that are not obtained through COCESS. These include items that are wash posted through the supply system such as ready mixed cement, asphalt, sand, gravel, etc. In addition wood products and items which are obtained from Federal Prison Industries and Federal Supply Schedules are also obtained from Base Supply.

(2) Bench Stocks. Bench stocks are also provided by Base Supply but not as a result of the BCE making a direct request. Rather, Base Supply fills bins located in the BCE's work area. The

bench stock is made up of a predetermined group of expendable, low cost items, that experience repetitive consumption. The bench stock provided by Base Supply to the BCE at Carswell Air Force Base consists of only 11 items. An item may be established on bench stock by request of the BCE, or as a result of a specific item being demanded and issued to the BCE three times in 90 days. Base Supply replenishes the bench stocks weekly when the quantity of an item is below 50% of the authorized level. When the replenishment is made, a card is input to the computer for the stock fund to be reimbursed with the BCE's O&M funds.

(3) Defense Property Disposal Office (DPDO). Materiel identified as being of use to the BCE and located in the DPDO is removed from the DPDO by Base Supply. When Base Supply makes the withdrawal and reissues the item to the BCE, the BCE uses O&M funds to reimburse the stock fund.

(4) Bills of Materials. BCE may also draw from stocks of materiel being held as BOMs for other work projects. These materiel are held by, and have already been expensed to, the BCE. When an item is identified in the stocks held as being able to satisfy another requirement, documentation is prepared transferring the item from one BOM to another provided the priority of the project to which the item will be transferred is higher than the project for which the item is being held.

(5) Residual Holding Area (RHA). RHA is another source for the BCE to draw materiel. The RHA is composed of items that are left over from completed work orders, and from work orders that have been cancelled. Items in this category are above $25 in value and are carried on a standing work order. When a requirement is identified, the items are transferred from the standing work order to the work order having the requirement. Items are placed in the RHA for a period of six months if there is a foreseeable requirement for them. If there is no foreseeable need, or if the items have been in the RHA for six months, they are turned in to Base Supply or the DPDO.

(6) COCESS. COCESS is another source of supply for the BCE at Carswell Air Force Base. It is from this source that the BCE draws the largest amount of his supplies. The COCESS is a contractor operated store located in the BCE area, dedicated to the support of the BCE. The contractor owns the stock in the store until it is issued to the BCE for use. The store provides all items that are designated in Federal Supply Catalogs as local purchase, and DSA items with a unit price of $50 or less, GSA stores items with a unit price

of $50 of less, and GSA nonstores items when the items purchase is $100 or less. In addition, the store provides all noncataloged items. The range stocked in the store from which the BCE may draw is 1,647 line items. In addition, the store has buyers to make purchases in the local area to satisfy within ten days, items which are not on materiel requirement listing. Any single item costing $250 or more, and any group of items $1,000 or more must be approved by the contracting officer (Chief of Procurement) prior to purchase through COCESS.

2. Supply Support from Central Sources

The Stock Number Directory (M-14) was screened to determine the diversity of sources from which base supply draws supplies to support the BCE. Thirteen Federal Supply Groups (FSGs) showing the highest expenditures by the BCE were selected from the Stock Fund Sales and Returns Analysis (M-09) to check against the M-14 to make the determination. The FSGs, the number of sources used, and the line items listed on the M-14 for each source are as follows:

| FSG | Nomenclature | Number of Sources | Number of Line Items Each Source |
|---|---|---|---|
| 29 | Engine Accessories | 9 | 695 |
| 41 | Refrigeration | 7 | 123 |
| 42 | Fire Fighting | 8 | 134 |
| 43 | Pumps and Accessories | 7 | 270 |
| 44 | Furnace and Steam Plant | 2 | 18 |
| 45 | Plumbing and Heating | 4 | 85 |
| 55 | Lumber, Millwork, Plywood | 4 | 77 |
| 56 | Construction and Building | 4 | 33 |
| 59 | Electrical and Electronic | 10 | 6,648 |
| 61 | Electric Wire | 13 | 756 |
| 62 | Lighting Fixtures | 6 | 743 |
| 80 | Brushes, Paints, Sealers | 2 | 451 |
| 87 | Agricultural | 2 | 10 |

NOTE: According to the M-09, approximately 75% of expenditures made by the CE with the stock fund were made in the above 13 FSGs.

Resupply of the items obtained from the various sources listed above varies according to the source. For example, items with a GSA or DSA source of supply are requisitioned by Base Supply using the Automatic Digital Network (AUTODIN). If an item is locally purchased, Base Supply submits requisitions to the base procurement

office where purchases are made from local vendors. If an item is to be locally manufactured, Base Supply must prepare a work request and submit it to the organization designated to fabricate a particular item.

Supplies obtained for the BCE by Base Supply are ordered using the priority assigned to the BCE. This priority is derived from a Force Activity Designator (FAD) IV. This allows the BCE to use Issue Priority Designator (IPD) 7, 9, or 14. IPD 7 is used in cases requiring urgent action. In exceptional cases, requisitions submitted by Base Supply for the BCE may be assigned the priority of the organization for which the BCE is doing work. For example, if the BCE is doing a job in an aircraft maintenance facility, required supplies are requisitioned using the priority of the organization for which the work is being done. The FAD assigned to an aircraft maintenance unit is normally a II or a III. This would allow urgently needed supplies to be requisitioned using a IPD of 2 or 3.

Local purchase of CP items is used when Base Supply cannot meet the BCE's required delivery date. According to BCE estimates, this occurs about once every 90 days. For other than CP items, emergency requirements are walked through the supply system on an average of once-a-week for BCE items.

3. Impact of COCESS. The COCESS was established in 1971 and has been operated by the same contractor--Consolidated Supply Company--since establishment. The impact of COCESS on Base Supply operations has been difficult to assess according to supply estimates. Determining the impact has been hampered by the Base Supply assuming a greater support role just after the implementation of COCESS. One way of assessing the impact is by determining if a reduction in Base Supply transactions was experienced in the years since COCESS establishment. Table X-1 shows only a slight decrease in Fiscal Year 1973, which was much later than the COCESS establishment. Fiscal Years 1974 and 1975 are sharply increased over the previous years which supports the assumption of a greater support role by Carswell Air Force Base in the years since COCESS establishment.

## D. BASE PROCUREMENT

### 1. Local Purchase.

At Carswell Air Force Base, finance and accounting data shows that the BCE received approximately $1.0 million in materiel support for Fiscal Year 1975. Categories of materiel support, by source, are as follows:

Table X-1

UNIVAC 1050-II TRANSACTIONS

| | FISCAL YEAR | | | | |
|---|---|---|---|---|---|
| | 1971 | 1972 | 1973 | 1974 | 1975 |
| July | 118,623 | 121,712 | 95,289 | 104,297 | 111,083 |
| August | 118,623 | 136,421 | 102,395 | 122,726 | 154,195 |
| September | 118,624 | 137,914 | 97,800 | 161,595 | 167,346 |
| October | 118,624 | 137,263 | 119,237 | 160,586 | 116,082 |
| November | 105,099 | 132,379 | 109,361 | 128,359 | 167,060 |
| December | 94,723 | 103,842 | 101,355 | 159,390 | 155,504 |
| January | 133,179 | 97,599 | 93,858 | 165,043 | 104,484 |
| February | 117,576 | 93,695 | 123,457 | 174,769 | 158,313 |
| March | 118,018 | 154,101 | 111,575 | 131,271 | 122,465 |
| April | 126,858 | 92,259 | 160,733 | 166,713 | 136,906 |
| May | 127,112 | 88,562 | 115,473 | 143,813 | 125,356 |
| June | 112,289 | 105,136 | 114,951 | 149,047 | 172,166 |
| TOTAL | 1,409,348 | 1,400,883 | 1,345,484 | 1,767,609 | 1,690,960 |
| AVERAGE | 117,446 | 116,740 | 112,124 | 147,301 | 140,913 |

Source: Field Research

| Source | Value of BCE Materiel Support ($000) | |
|---|---|---|
| COCESS | $ 474.8 | 46.3% |
| COPARS | 7.1 | 0.7% |
| Local Procurement (Bulk Items) 1/ | 81.9 | 8.0% |
| Local Procurement (Equipment 2/ | 57.1 | 5.6% |
| Base Supply 3/ | 389.5 | 38.0% |
| Local Procurement (Fuel Oil) 4/ | 14.1 | 1.4% |
| TOTAL | $1,024.5 | 100.0% |

1/ Concrete, asphalt, ice, propane, and lumber obtained from Fort Worth vendors under Carswell Air Force Base Blanket Purchase Agreements (BPAs); approximately 200 calls.

2/ Refrigerators, ranges, and similar equipment obtained through Delivery Orders under GSA mandatory Federal Supply Schedule.

3/ Materiel received through Base Supply; Base Supply sources are primarily DSA (DSCs) and GSA (Stores); a small number of items

and obtained from Military Services Inventory Control Points (ICPs) or as a result of Base Supply initiated local purhcase actions.

4/ Delivery orders under Carswell Air Force Base or Defense Fuel Supply Center (DFSC) IDTCs. Of the $1,024,500 in materiel support provided to the BCE at least $635,000 (62%) was provided through some form of local procurement arrangement. The remainder of this paragraph will discuss the base procurement organization and the procurement arrangements for providing BCE support.

2. The Carswell Air Force Base COCESS.

a. General. The Carswell Air Force Base COCESS is considered to be a "FULL" COCESS; that is, the contract provides for the most extensive range of materiel support provided under such an arrangement. The COCESS has been in existence since 1971 and a single contractor, Consolidated Supply of Blytheville, Arkansas, has provided the contractual service since that time. The contract, estimated at approximately a half million dollars annually, was readvertised in early 1975, and a new contract was awarded in May 1975.

b. Customers and Sales Volume

The primary customer of the COCESS is the BCE; however, other organizations including tenants on the Base use the store. Sales by customer for Fiscals Years 1974 and 1975 were as follows:

| Customer | Fiscal Year 1974 | Fiscal Year 1975 |
|---|---|---|
| Civil Engineer | $539,309 | $474,834 |
| Bomb Wing | 11,928 | 7,165 |
| Combat Support | 9,530 | 6,328 |
| Hospital | 996 | 2,658 |
| Satellite Support | 115 | 162 |
| Communications Group | 40 | 935 |
| Total Base Activities | $561,918 | $492,082 |
| Tenants* | 22,642 | 27,181 |
| Total from COCESS | $584,560 | $519,263 |

*Includes an armed forces television station, a communications group, and three reserve units; the reserve units accounted for $20,322 and $24,436 in Fiscal Years 1974 and 1975 respectively.

From 1 December 1971 to 31 May 1975 total volume of sales was approximately $1.8 million, or an average of about

$43 thousand per month for the period. Monthly sales ranged from about $30 thousand to about $82 thousand. During the period 47,657 line items were issued on about 15,000 sales slips; slightly less than three items per sales slip. During a recent 12-month period average monthly orders were:

** 465 Sales Slips
** 1,300 Line Items
**$48,235

c. The Invitation for Bid (IFB) and Response

When the Solicitation for Bids was issued in January 1975, 21 potential contractors were solicited; eight responded and received consideration. Total bids ranged from $570,368.56 to nearly $800 thousand. There were only $13,400 difference between the lowest bidder, Consolidated Supply Company, and the second lowest bidder; less than $93 thousand separated the seventh lowest bidder from the lowest.

Geographically the seven lowest bidders were dispersed as follows:

| State | Bidders |
|---|---|
| Texas | 1 |
| Arkansas | 2 |
| Missouri | 1 |
| California | 1 |
| Montana | 1 |
| Wisconsin | 1 |
| New Hampshire | 1 |

Bidders were required to submit estimates of cost based on a three part schedule:

Part I --Price Listed Items (Figure X-4)
Part II --Nonprice Listed (NPL) Supplies (Figure X-5)
Part III--Other Listed Items (Figure X-6)

d. Store Operation. The space allocation and operating hours of the COCESS are prescribed in the contract.

(1) Space. The Government provides the contractor with 2,960 square feet of storage and counter space in a single building, plus 4,960 square feet of fenced outside storage.

SECTION E
PART I--SCHEDULE OF ITEMS

PRICE LISTED ITEMS. The Government estimate of material stated below is the annual anticipated requirement at retail value based on expenditures for the previous year for items in the indicated categories, less those included in Parts II and III of this Schedule. Discounts to be cited by the offeror in the spaces provided are to be from widely advertised and published suggested retail (list prices). Any negative discounts (plus percentages) may cause the offer to be rejected. Discounts proposed by the offeror shall remain in effect during the term of the contract.

ITEM 1--Plumbing
Government Estimate $21,965.93 Discount 47% Net Amount $11,641.94

ITEM 2--Electrical
Government Estimate $20,935.29 Discount 47% Net Amount $11,095.70

ITEM 3--Hardware
Government Estimate $12,361.88 Discount 37% Net Amount $ 7,787.98

ITEM 4--Heating
Government Estimate $41,535.59 Discount 52% Net Amount $19,937.08

ITEM 5--Refrigeration
Government Estimate $67,495.35 Discount 52% Net Amount $32,397.76

ITEM 6--Building Supplies
Government Estimate $16,411.33 Discount 37% Net Amount $10,339.14

ITEM 7--Paint
Government Estimate $3,328.14 Discount 35% Net Amount $ 2,163.29

ITEM 8--Sheet Metal
Government Estimate $12,979.88 Discount 52% Net Amount $ 6,230.34

ITEM 9--Agricultural Supplies (see paragraph 1a, Section J)
Government Estimate $15,497.99 Discount 42% Net Amount $ 8,988.83

ITEM 10--Operation of Store During Non-Duty Hours When Required
Government Estimate of Hours (Annual) 38 Bidder's Charge Per Hour 4.00 Amount $ 152.00

ESTIMATED TOTAL--PART I $110,734.06

(Total Part I, extracted from submission of lowest bidder.)

Figure X-4

SECTION E
PART II--SCHEDULE OF ITEMS

NON-PRICE LISTED (NPL) SUPPLIES. It is intended that this part will cover those items of supply which are not covered by an appropriate price list for Part I or specifically listed in Part III of this Schedule. Basis of payment for items which are non-price listed will be at the contractor's net invoice cost after prompt payment discount plus the service charge shown below plus transportation charges. The amount of the service charge paid will be determined by the number of line items of NPL delivered during the payment period.

ITEM 101--NPL Property Government Estimate $45,000.00

ITEM 102--NPL Service Charge

| Est Line Items/Year | x | Unit Price | = | Est Service Charge |
|---|---|---|---|---|
| 1608 | x | $2.10 | = | $ 3,376.80 |

ESTIMATED TOTAL-PART II $48,376.80

(Total Part II, extracted from submission of lowest bidder.)

Figure X-5

SECTION E
PART III--SCHEDULE OF ITEMS

OTHER LISTED ITEMS.

The estimated quantity for the items below is the annual anticipated usage based on consumption for the previous year.

PLUMBING

| ITEM | DESCRIPTION | SIZE | UNIT | EST QTY | UNIT PRICE | TOTAL |
|---|---|---|---|---|---|---|
| *001 | Adapter PVC SCH 40 SXFPT | 1/2 x 1/2 | EA | 0150 | .09 | 13.50 |
| *002 | " | 3/4 x 1/2 | EA | 0150 | .14 | 21.00 |
| *003 | " | 3/4 x 3/4 | EA | 0150 | .13 | 19.50 |
| *005 | Adapter, Straight, Copper to Male Iron Pipe Thread, Wrought Iron Copper Solder-Joint Fittings | 1/2 x 1/2 | EA | 0120 | .14 | 16.80 |
| *006 | " | 3/4 x 3/4 | EA | 0120 | .22 | 26.40 |
| *033 | Adapter, Male SXMPT PVC Pipe | 1/2 x 1/2 | EA | 0100 | .09 | 9.00 |
| *034 | " | 3/4 x 3/4 | EA | 0100 | .10 | 10.00 |
| *035 | " | 1 x 1 | EA | 0100 | .17 | 17.00 |
| *036 | " | 1¼ x 1¼ | EA | 0100 | .20 | 20.00 |
| *037 | " | 1½ x 1½ | EA | 0100 | .29 | 29.00 |
| *038 | " | 2 x 2 | EA | 0100 | .44 | 44.00 |
| *048 | Angle Stop IPS to Ferruel R-17 | 1/2 x 3/8 | EA | 0096 | 1.11 | 106.56 |
| *049 | Arm Guide Water Closet Tank, Adj Plastic 1-in Over Flow Pipe 4059-C | | EA | 0100 | .60 | 60.00 |
| *051 | Assembly--Valve Stem Lava Sexauer--7362 or Equal | | EA | 0070 | 1.51 | 105.70 |

BIDDING ON:_____

MANUFACTURER'S NAME S A M E BRAND_____ NO._____

(First page of Part III extracted from submission of lowest bidder.)

Figure X-6

| ITEM | DESCRIPTION | SIZE | UNIT | EST QTY | UNIT PRICE | TOTAL |
|---|---|---|---|---|---|---|
| *037 | Seed, Bermuda, hulled for warm weather seeding, standard item | | LB | 0400 | 1.45 | 580.00 |
| *038 | Sodium Hexametaphosphate Granular | 100 LB Bag | BG | 0006 | 37.50 | 225.00 |
| *039 | Sodium Chloride Technical Salt | 100 LB Bag | BG | 0060 | 4.40 | 264.00 |
| *041 | Seal Bond Rejuvenator Mil Spec SSB-440, for sealing asphalt pavements | 55 Gal DR | DR | 0020 | 41.25 | 825.00 |
| *043 | Urea, Chemical, Pelletized, 45% nitrogen, Class 2, Mil Spec U-10866C For ice control on airfield pavements | | TN | 0008 | 322.00 | 2576.80 |
| | | | PART III TOTAL | | | 411,257.70 |

(Last page of Part III extracted from submission of lowest bidder.)

Figure X-6 (continued)

Utilities and toilet facilities for three people are also provided. Government equipment provided includes: storage bins, three counters (23" x 74"), a storage cabinet, one desk, one file cabinet, one table, and four chairs.

(2) Operating Hours. The contractor furnishes personnel, supplies, and equipment to operate the store during the 8-hour, 5-day work week observed by the CE squadron. Operation beyond normal duty hours requires two hours notice and special payment. (A requirement of only 38 hours annual overtime is estimated by the Carswell Air Force Base CE). The nine Government holidays are observed.

e. Items Excluded. A specified range of items are excluded from the COCESS contract. This item range is described in Section H, paragraph 3 of the contract as follows:

"A. GOVERNMENT OWNED SUPPLIES. THE GOVERNMENT MAY UTILIZE EXISTING SUPPLIES ON THE BASE IN LIEU OF PURCHASING LIKE ITEMS UNDER THIS CONTRACT.

"B. MATERIAL UNDER MAINTENANCE AND REPAIR CONTRACTS. PARTS AND MATERIAL TO BE INCORPORATED IN EQUIPMENT OR REAL PROPERTY UNDER SEPARATE CONTRACTS FOR MAINTENANCE, REPAIR AND MINOR CONSTRUCTION WILL NOT BE PROCURED UNDER THIS CONTRACT.

"C. CENTRALLY MANAGED/PROCURED ITEMS EXCEPT AS FOLLOWS:

(1) GENERAL SERVICES ADMINISTRATION STORES ITEMS IN ASSIGNED CLASSES WHEN THE UNIT PRICE IS $50.00 OR LESS;

(2) GENERAL SERVICES ADMINISTRATION NON-STORES ITEMS WHEN THE ITEM PURCHASE IS $100.00 OR LESS;

(3) DEFENSE SUPPLY AGENCY CENTRALLY MANAGED ITEMS WHEN THE UNIT PRICE IS $50.00 OR LESS;

(4) OTHER CENTRALLY MANAGED ITEMS TO MEET URGENT OR EMERGENCY REQUIREMENTS WHICH CANNOT BE PROVIDED THROUGH NORMAL SUPPLY CHANNELS TO MEET THE REQUIRED DELIVERY DATE.

"D. FEDERAL PRISON/BLIND-MADE SUPPLIES EXCEPT WHEN THE TOTAL COST OF THE ORDER IS $25.00 OR LESS.

"E. TOOLS NORMALLY USED BY INDIVIDUALS OR WITHIN SHOPS. THIS DOES NOT INCLUDE PAINT BRUSHES, PAINT ROLLERS, ETC.

"F. INDIVIDUAL EQUIPMENT ITEMS, SUCH AS SAFETY-TOED SHOES, SAFETY GLASSES AND WEARING APPAREL.

"G. MATERIAL PRIMARILY USED BY OTHER THAN THE CIVIL ENGINEER FORCES.

"H. PESTICIDES AND HERBICIDES.

"I. WOOD PRODUCTS: DIMENSIONAL LUMBER AND PLYWOOD."

f. Definitions, Stockage, Ordering, and Pricing. Section J, "Special Provisions," of the contract contains definitions, stores, stockage criteria, ordering ground rules, delivery requirements, and price lists, among other things. Figure X-7 contains an extract of Section J.

E. INDIVIDUAL ITEM RESEARCH

1. Review of Work Orders (W/O). A review of seven uncompleted W/O revealed the following:

a. Two were delayed for additional planning and change in scope.

b. The remaining five W/O involved seven items of supply with status as shown:

--one item was not received and no follow-up had been initiated.

--two items had been received.

--one item was on-hand in COCESS and would be issued when required.

--one item had not been ordered, supply had not been advised by CE.

--two items were lost in transit, and tracer action initiated.

c. W/O reviewed are listed below with pertinent information.

(1) W/O Nr A-13389 required a Lavatory complete with fittings, Kohler model, unit price $100.26. One each was ordered by Procurement and Contracting (P&C) during June for a 15 September

EXTRACT OF SECTION J

SECTION J

SPECIAL PROVISIONS

1. DEFINITIONS. AS USED THROUGHOUT THIS CONTRACT, THE FOLLOWING DEFINITIONS OF TERMS WILL APPLY:

A. COCESS IS AN ACRONYM FOR CONTRACTOR OPERATED CIVIL ENGINEER SUPPLY STORE.

B. BENCH STOCK FOR PURPOSES OF THIS CONTRACT WILL CONSIST OF THOSE ITEMS LISTED IN THE ESTIMATED MATERIAL REQUIREMENTS LISTING, EXHIBIT B, WITH ONE ASTERISK AND HAVE AN ESTIMATED ANNUAL CONSUMPTION OF 12 OR MORE.

C. LINE ITEM IS ANY QUANTITY OF A SINGLE ITEM BEARING THE SAME DESCRIPTION CONCERNING SIZE, QUALITY, AND PURPOSE. FOR PAYMENT PURPOSES, A LINE ITEM IS AN ENTRY ON A SALES SLIP FOR ANY QUANTITY OF AN ITEM BEARING THE SAME DESCRIPTION AND UNIT PRICE.

D. NON-PRICE LISTED (NPL) ITEMS ARE THOSE WHICH ARE NOT INCLUDED IN ANY PUBLISHED PRICE LIST INCORPORATED IN THIS CONTRACT AS EXHIBIT A OR LISTED INDIVIDUALLY IN PART III OF SECTION E.

E. CENTRALLY MANAGED/PROCURED ITEMS ARE THOSE WHICH ARE PROCURED, STORED AND ISSUED BY OTHER GOVERNMENT AGENCIES.

F. LIST PRICE. THE PRICE SHOWN IN THE MANUFACTURER'S OR DISTRIBUTOR'S PRICE LIST CATALOGUE UNDER THE COLUMN HEADED "SUGGESTED LIST PRICE FOR RETAIL" OR OTHER TERMINOLOGY WHICH POSITIVELY IDENTIFIES THE PRICE FROM WHICH DEALERS NORMALLY COMPUTE THEIR TRADE DISCOUNT.

G. PREMIUM COMMUNICATIONS. A COMMUNICATIONS SERVICE MORE COSTLY THAN THOSE USED BY THE CONTRACTOR IN NON-EMERGENCY, DAILY BUSINESS TRANSACTIONS.

H. PREMIUM TRANSPORTATION. A TRANSPORTATION SERVICE MORE COSTLY THAN THOSE USED BY THE CONTRACTOR IN NON-EMERGENCY, DAILY BUSINESS TRANSACTIONS.

I. AGRICULTURAL SUPPLIES ARE THOSE ITEMS COMMONLY USED IN THE MAINTENANCE OF THE GROUNDS INCLUDING SUCH ITEMS AS WATER TREATMENT CHEMICALS, SEED, FERTILIZER, PEAT MOSS, ETC. ALSO INCLUDED ARE REPAIR PARTS AND COMPONENTS (NOT AUTOMOTIVE RELATED) FOR AGRICULTURAL TYPE EQUIPMENT.

SOURCE: CARSWELL AFB IFB FOR COCESS

FIGURE X-7

requirement. Item was not received and very little follow-up action had been taken. Consequently, job was rescheduled from September to October.

(2) W/O 13240 required two items:

(a) 8010-00-582-5882
Lacquer, acrylic, pint can pressurized,
Flat Black Number 37038, 93¢ each

(b) 8010-00-721-9744
Lacquer, acrylic, pint can pressurized,
Yellow Number 13538, $1.00 each
Ordered from Base Supply 11 August 1975.
Required 23 September 1975.
Items were on hand.

(3) W/O 70009 required 10 each Expansion Shield for concrete anchors at unit price of 22¢ each. Items were required by 22 September 1975. Items are available in COCESS and will be drawn when required.

(4) W/O 13082 required six each Drop Lights, reel with/ retriever, 100 watts, 50-foot cord, at a unit price of $30.90. Source was to be local purchase (Dahl Tool Company, 4817B River Oaks Blvd). Originally 22 drop lights were ordered on 14 May 1975 through Base Supply and were received 31 July 1975. However a change in scope of job produced requirements for an additional six drop lights. The additional lights were not on order as of 24 September 1975 as supply had not been advised of the requirement.

(5) W/O 13224 was delayed for additional planning and ordering of additional materiel.

(6) W/O 13522, two items:

(a) Manual motor starter toggle operated catalog number CRY 10141 Graylar, $7.50 each

(b) Manual motor starter toggle operated catalog number CRY 1062 516 Graylar, $64.00 each

One each of above items ordered from COCESS 24 July for required date of 5 August. Item shipped about 5 September but never arrived Carswell Air Force Base. Tracer action had been initiated.

(7) W/O 10837 was delayed due to a change in scope of the W/O as a result of a health inspection by the base veterinarian.

2. Items Difficult to Acquire. During the team visit, information was provided by BCE personnel that items listed below are difficult to obtain.

| | | |
|---|---|---|
| Carpenter | -- | Exterior Doors |
| | -- | Lock Parts (Best) |
| Plumbing | -- | Flanges |
| | -- | Fire Hydrant Parts |
| Hospital | -- | Recording Charts (Hayes) |
| | -- | Gaskets (boiler with/hole) |
| Electric | -- | Line Poles |
| | -- | Transformers |
| | -- | Oil Switches |
| | -- | Circuit Breakers (100 amperes and up) |
| | -- | Underground Cable (some types) |
| | -- | Strobe parts } AF Lighting |
| | -- | Regulators } AF Lighting |
| | -- | Disconnects (400 amperes and up) |
| Refrigeration | -- | Perma Gum |
| | -- | Coils, 24 volt |
| | -- | "Zerk" fittings (grease) |
| | -- | Special type circulating pumps |
| | -- | Electronic Controls (Honeywell) |

# CHAPTER XI

# HILL AIR FORCE BASE

## A. MANAGEMENT DATA

### 1. Overall Organization

Hill Air Force Base is the location of the Air Force Ogden Air Logistics Center (ALC), and the organization established to operate the installation is an integral element of the organization of the ALC. The mission of the Ogden ALC is: to accomplish logistics support management responsibilities for assigned materiel; operate depot level maintenance and storage facilities; and provide Air Force-wide logistics support for nonnuclear munitions.

The overall organization of the Ogden ALC is shown in Figure XI-1. Total authorized manning of the Ogden ALC is 15,809 military and civilian personnel.

Within this integrated organization for the accomplishment of both the ALC and installation missions, functions of interest to this study are organizationally located as follows:

a. Facilities Engineer. Responsibility for the operation of Hill Air Force Base as a physical facility is assigned to the 2849th Air Base Group. Organization of the group, which has a total authorized manning of 1,517, is shown in Figure XI-2. The facilities engineer function is accomplished by the Civil Engineering Division of the Air Base Group.

b. Supply Support. The installation supply function, including supply support of the Base Civil Engineer (BCE), is assigned to the Directorate of Distribution of the ALC.

c. Procurement Support. The installation procurement function, including local purchase to support the Base Civil Engineer, is assigned to the Directorate of Procurement and Production of the ALC.

### 2. Facilities Engineer Organization

The facilities engineer mission for Hill Air Force Base is assigned to the Civil Engineering Division of the 2849th Air Base Group. The mission of this Division is to accomplish the following: real



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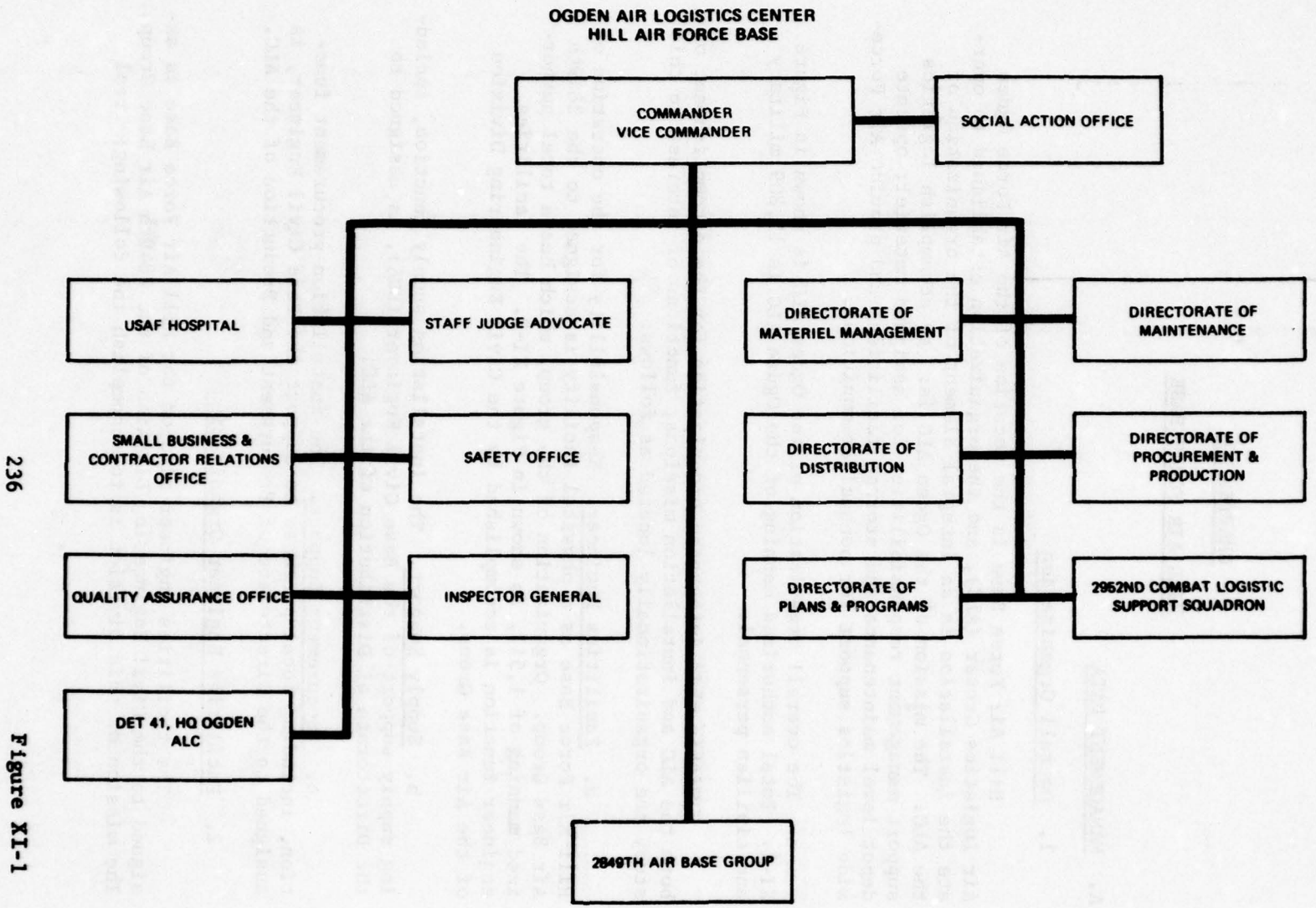

OGDEN AIR LOGISTICS CENTER
HILL AIR FORCE BASE
COMMANDER
VICE COMMANDER
SOCIAL ACTION OFFICE
USAF HOSPITAL
STAFF JUDGE ADVOCATE
DIRECTORATE OF MATERIEL MANAGEMENT
DIRECTORATE OF MAINTENANCE
SMALL BUSINESS & CONTRACTOR RELATIONS OFFICE
SAFETY OFFICE
DIRECTORATE OF DISTRIBUTION
DIRECTORATE OF PROCUREMENT & PRODUCTION
QUALITY ASSURANCE OFFICE
INSPECTOR GENERAL
DIRECTORATE OF PLANS & PROGRAMS
2952ND COMBAT LOGISTIC SUPPORT SQUADRON
DET 41, HQ OGDEN ALC
2849TH AIR BASE GROUP

Figure XI-1

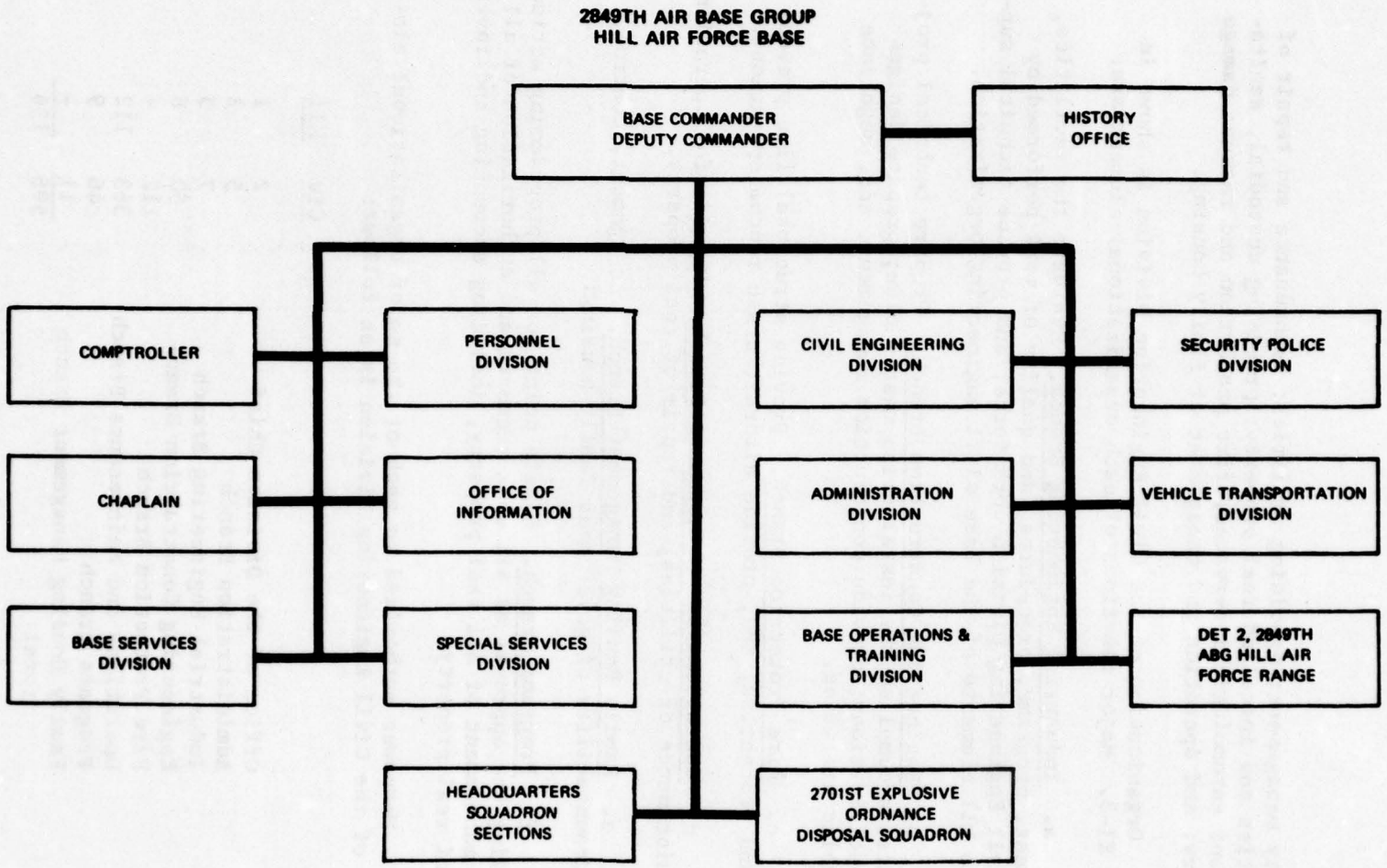

2849TH AIR BASE GROUP
HILL AIR FORCE BASE
BASE COMMANDER
DEPUTY COMMANDER
HISTORY
OFFICE
COMPTROLLER
PERSONNEL
DIVISION
CIVIL ENGINEERING
DIVISION
SECURITY POLICE
DIVISION
CHAPLAIN
OFFICE OF
INFORMATION
ADMINISTRATION
DIVISION
VEHICLE TRANSPORTATION
DIVISION
BASE SERVICES
DIVISION
SPECIAL SERVICES
DIVISION
BASE OPERATIONS &
TRAINING
DIVISION
DET 2, 2849TH
ABG HILL AIR
FORCE RANGE
HEADQUARTERS
SQUADRON
SECTIONS
2701ST EXPLOSIVE
ORDNANCE
DISPOSAL SQUADRON

Figure XI-2

property management; providing utilities; maintenance and repair of facilities and installed real property; providing custodial, sanitation, and entomological services; fire protection and rescue; damage recovery; and operation and management of family housing.

Organization of the Civil Engineering Division is shown in Figure XI-3. Major functions of each organizational element are:

a. Industrial Engineering Branch. Evaluate the facilities, equipment, programs, procedures, and quality of work performed by the Civil Engineering Division work force; and provide technical support to all elements of the base civil engineering organization.

b. Engineering Construction Branch. Prepare technical project data; accomplish the installation master plan; prepare designs and specifications; provide construction management; and, negotiate for public utilities.

c. Fire Protection Branch. Provide structural fire prevention and protection; and, provide aircraft crash rescue operations.

d. Operations and Maintenance Branch. Provide for operation and maintenance of utilities, and repair of real property.

e. Family Housing Management Branch. Assignment, control, and accountability of government family housing.

f. Programs Branch. Single point for all programming actions, including the approval of all work requests and authorization of all work; management of all real property, including accounting and inventory of real property.

Manpower authorized to each of the major organizational elements of the Civil Engineering Division is as follows:

| | Civ | Mil |
|---|---|---|
| Office of the Division Chief | 2 | 1 |
| Administration Branch | 5 | 3 |
| Industrial Engineering Branch | 7 | 3 |
| Engineering Construction Branch | 50 | 8 |
| Fire Protection Branch | 112 | - |
| Operations and Maintenance Branch | 363 | 112 |
| Programs Branch | 46 | 9 |
| Family Housing Management Branch | 11 | - |
| Total | 596 | 136 |

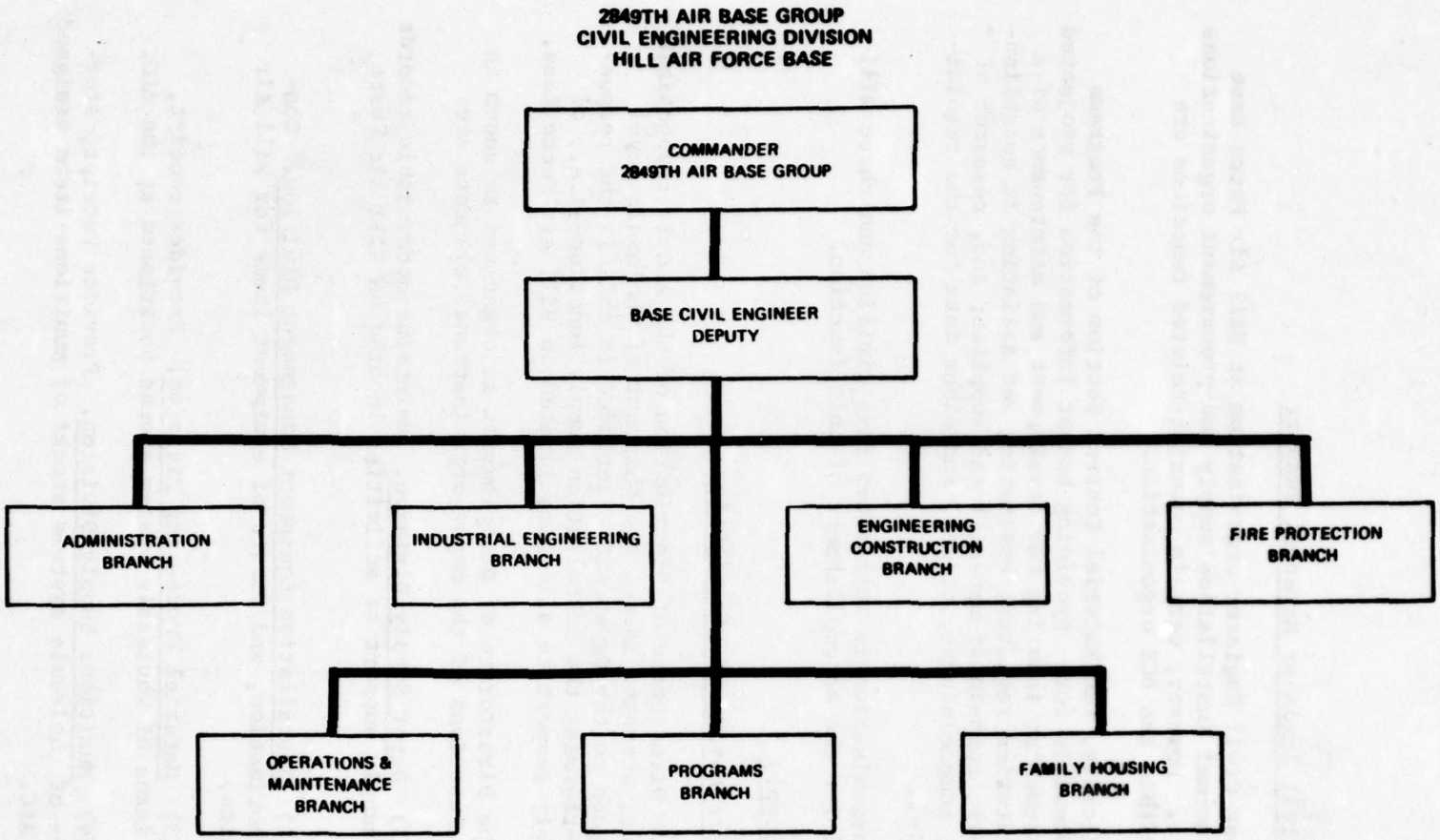

2849TH AIR BASE GROUP
CIVIL ENGINEERING DIVISION
HILL AIR FORCE BASE
COMMANDER
2849TH AIR BASE GROUP
BASE CIVIL ENGINEER
DEPUTY
ADMINISTRATION
BRANCH
INDUSTRIAL ENGINEERING
BRANCH
ENGINEERING
CONSTRUCTION
BRANCH
FIRE PROTECTION
BRANCH
OPERATIONS &
MAINTENANCE
BRANCH
PROGRAMS
BRANCH
FAMILY HOUSING
BRANCH

Figure XI-3

3. Base Civil Engineer Materiel Support

The Base Civil Engineer organization at Hill Air Force Base relies on the normal installation supply and procurement organizations for its support. However, certain materiel-related functions are accomplished within the BCE organization.

Specifically, the Materiel Control Section of the Programs Branch is responsible for: providing budget information for projected materiel requirements; insuring the development and maintenance of a materiel substitution register; estimating and assisting in establishing stock levels; turn-in of materiel and supplies; and, research of stock numbers, nomenclatures, prices, and other data for the requisition of materiel.

This organization is authorized five civilian and three military personnel for the accomplishment of this function.

4. Base Supply

a. Directorate of Distribution

The Directorate of Distribution of the ALC is responsible for the receipt, storage, issue, and shipment of wholesale-level materiel assigned to the Ogden ALC. Included in this is the responsibility of performing the installation supply function--i.e., of providing supply support to all units located on Hill Air Force Base.

The Directorate of Distribution is organized as shown in Figure XI-4. Functions of the major organizational elements are:

(1) Depot Supply Division. Maintains accountable records and provides supply support to activities located on Hill Air Force Base.

(2) Installation Equipment Management Division. Controls the authorization, and assets of equipment items for Hill Air Force Base units.

(3) Materiel Processing Division. Provides receipt, storage, and issue of wholesale system stocks positioned at the ALC.

(4) Munitions Supply Division. Provides receipt, storage, and issue of wholesale systems stocks of munitions items assigned to the Ogden ALC.

SUPPLY ORGANIZATIONAL CHART
HILL AIR FORCE BASE

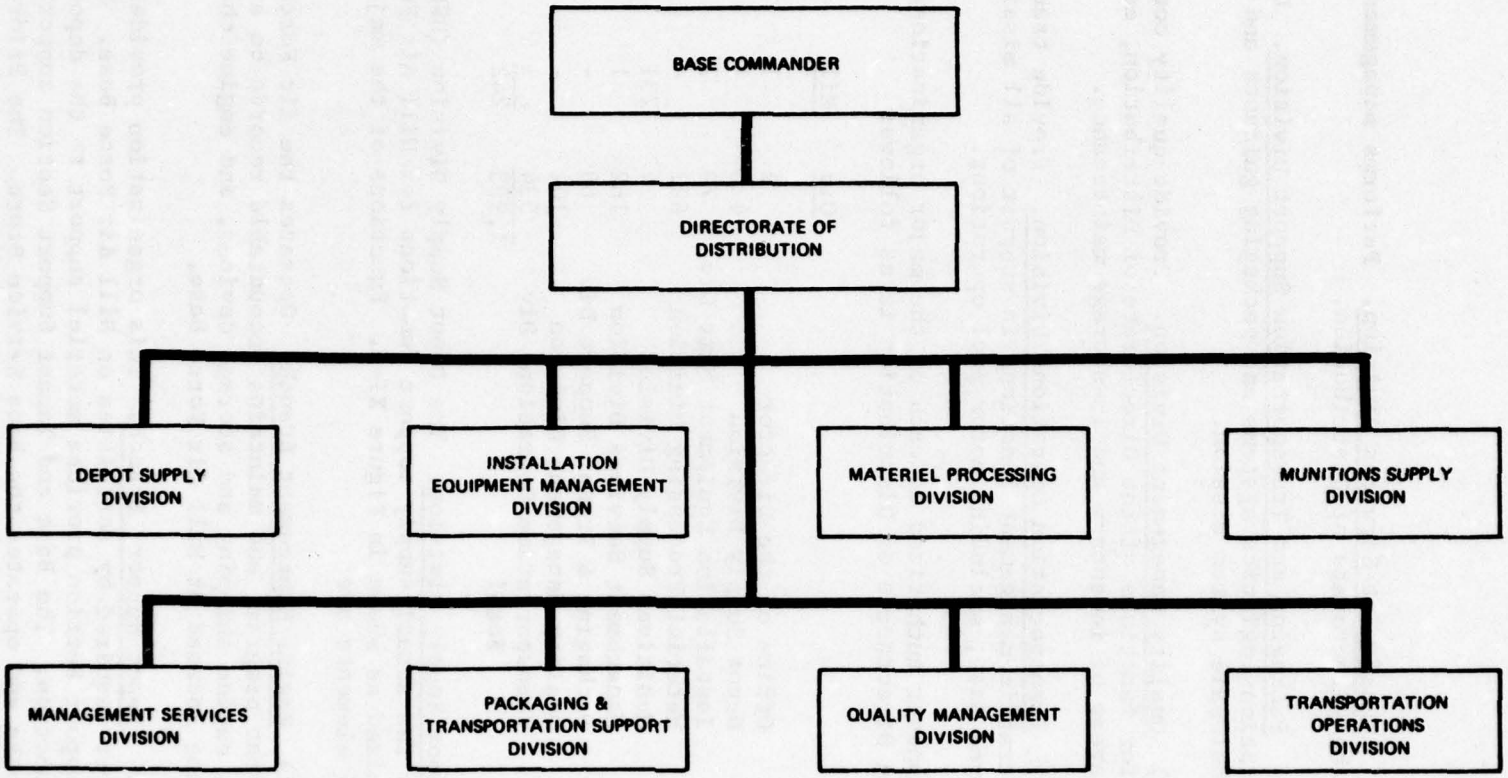



Figure XI-4

(5) Management Services Division. Performs management functions for the Directorate of Distribution.

(6) Packaging and Transportation Support Division. Develop transportation logistics systems and packaging guidance and support for the wholesale system mission.

(7) Quality Management Division. Provide quality control services for functions of the Directorate of Distribution, especially in the areas of inventory and in-storage maintenance.

(8) Transportation Operations Division. Provide transportation and traffic management functions in support of all missions on Hill Air Force Base, excluding motor pool operations.

Manpower authorized to each of the major organizational elements of the Directorate of Distribution is as follows:

| | Civ | Mil |
|---|---|---|
| Office of the Director | 2 | 1 |
| Depot Supply Division | 420 | 1 |
| Installation Equipment Mgmt Div | 79 | 7 |
| Materiel Processing Division | 622 | - |
| Munitions Supply Division | 4 | 231 |
| Management Services Division | 162 | 1 |
| Packaging & Trans. Support Div | 69 | - |
| Quality Management Division | 101 | - |
| Transportation Operations Div | 534 | 1 |
| Total | 1,993 | 242 |

b. Depot Supply Division. The Depot Supply Division (DSD), which performs the actual supply support functions for Hill Air Force Base, is organized as shown in Figure XI-5. Functions of the major organizational elements are:

(1) Engine Management Branch. Operates the Air Force engine management program, and maintains accountable records on aircraft engines, engine shipping and storage devices, and engine change kits, for engine located at Hill Air Force Base.

(2) Depot Support Branch. This organization provides the materiel support required by activities on Hill Air Force Base. The Maintenance Support Section provides materiel support to the depot maintenance function. The Base and Tenant Support Section supports the base bench stocks and operates the Base Service Store. The Priority Distribution Section provides expedited distribution of required materiel.

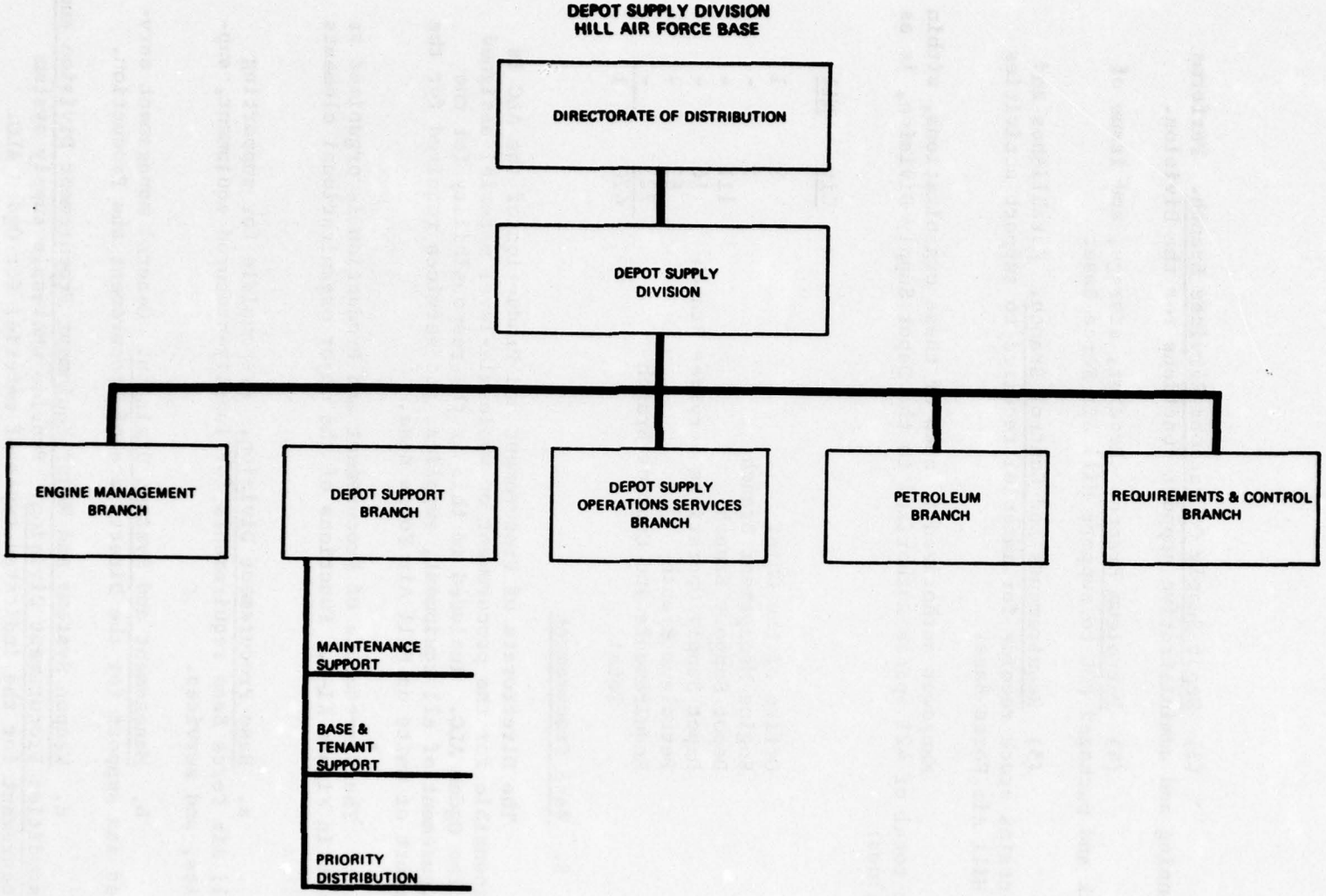

DEPOT SUPPLY DIVISION
HILL AIR FORCE BASE
DIRECTORATE OF DISTRIBUTION
DEPOT SUPPLY DIVISION
ENGINE MANAGEMENT BRANCH
DEPOT SUPPORT BRANCH
DEPOT SUPPLY OPERATIONS SERVICES BRANCH
PETROLEUM BRANCH
REQUIREMENTS & CONTROL BRANCH
MAINTENANCE SUPPORT
BASE & TENANT SUPPORT
PRIORITY DISTRIBUTION

Figure XI-5

(3) Depot Supply Operations Services Branch. Performs planning and administrative support functions for the Division.

(4) Petroleum Branch. Receipt, storage, and issue of bulk and packaged POL to support Hill Air Force Base.

(5) Requirements and Control Branch. Establishes and maintains stock records for materiel required to support activities on Hill Air Force Base.

Manpower authorized to each of these organizations, within the total of 421 spaces authorized to the Depot Supply Division, is as follows:

| | Civ | Mil |
|---|---|---|
| Office of the Chief | 2 | 1 |
| Engine Management Branch | 5 | - |
| Depot Support Branch | 111 | - |
| Depot Supply Operations Services Branch | 16 | - |
| Petroleum Branch | 63 | - |
| Requirements and Control Branch | 223 | - |
| Total | 420 | 1 |

5. Base Procurement

The Directorate of Procurement and Production of the ALC is responsible for the procurement of wholesale-level materiel assigned to the Ogden ALC. Included in this is the responsibility for the procurement of all equipment, supplies, and services required for the support of units on Hill Air Force Base.

The Directorate of Procurement and Production is organized as shown in Figure XI-6. Functions of the major organizational elements are:

a. Base Procurement Division. Responsible for supporting Hill Air Force Base requirements for locally-procured equipment, supplies, and services.

b. Management and Systems Division. General management services and support for the Directorate of Procurement and Production.

c. Weapon Systems and Major Equipment Procurement Division and Commodities Procurement Division. Provide wholesale supply system procurement for the indicated types of materiel for Ogden ALC.

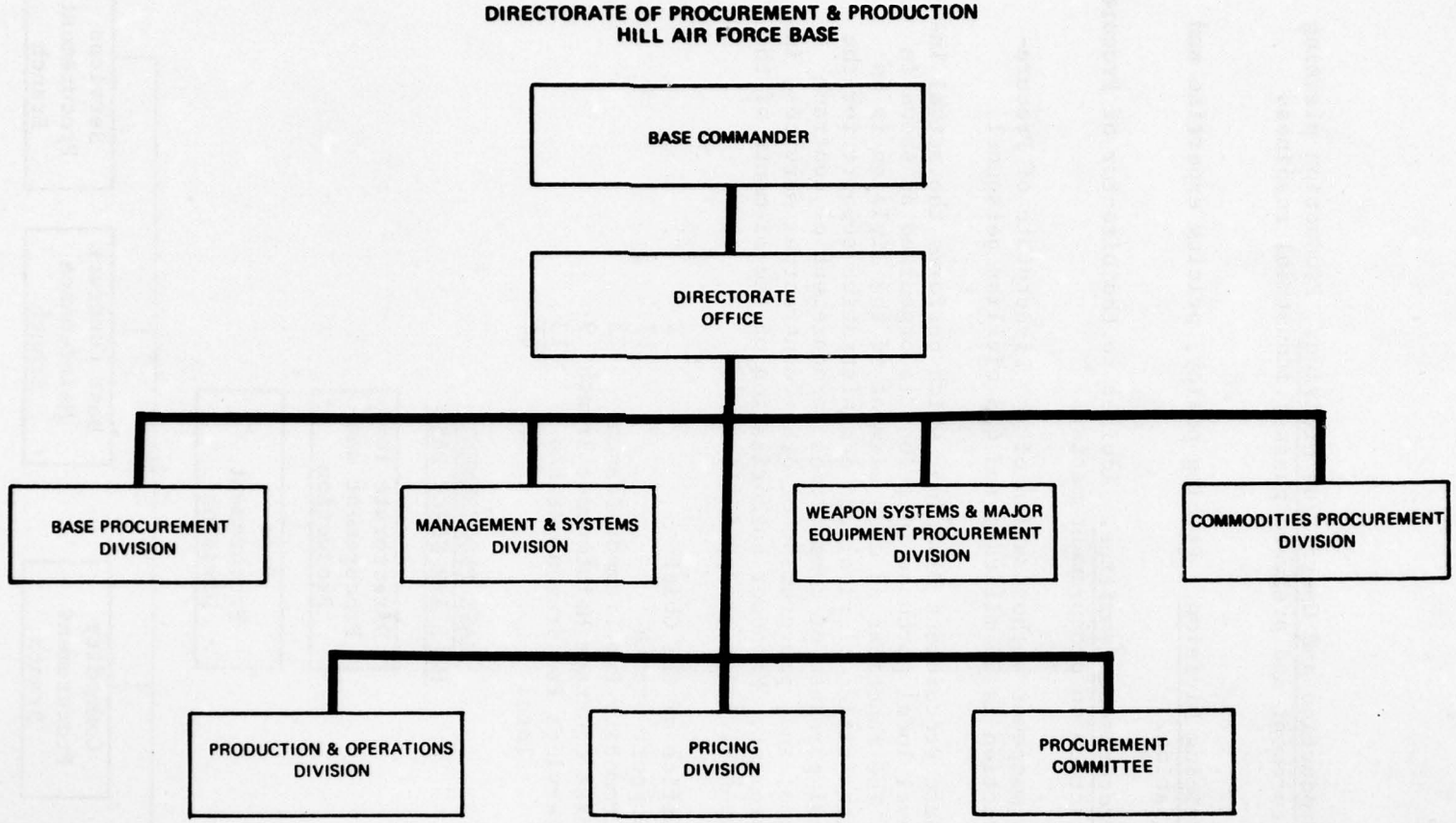

DIRECTORATE OF PROCUREMENT & PRODUCTION
HILL AIR FORCE BASE
BASE COMMANDER
DIRECTORATE OFFICE
BASE PROCUREMENT DIVISION
MANAGEMENT & SYSTEMS DIVISION
WEAPON SYSTEMS & MAJOR EQUIPMENT PROCUREMENT DIVISION
COMMODITIES PROCUREMENT DIVISION
PRODUCTION & OPERATIONS DIVISION
PRICING DIVISION
PROCUREMENT COMMITTEE

Figure XI-6

d. Production and Operations Division. Production planning during preprocurement and preaward phases; industrial readiness planning.

e. Pricing Division. Pricing policy, pricing expertise and pricing negotiation.

f. Procurement Committee. Adviser to the Director of Procurement and Production on procurement matters.

Total manpower authorization of the Directorate of Procurement and Production is 23 military and 403 civilian personnel.

The Base Procurement Division, which performs the actual installation-level local purchase function, is organized as shown in Figure XI-7. The functions of each element of the Division is as indicated by the title: clerical and administrative support for the Division; local purchase of commodities; procurement of contract repair services; and, procurement of other contractual services, including procurement. Manpower authorization of the elements of the Base Procurement Division are as follows:

| | |
|---|---|
| Office of the Chief | 2 |
| Support Branch | 17 |
| Commodity Procurement Branch | 23 |
| Base Contract Maintenance Branch | 9 |
| Services Procurement Branch | 13 |
| Total | 64 |

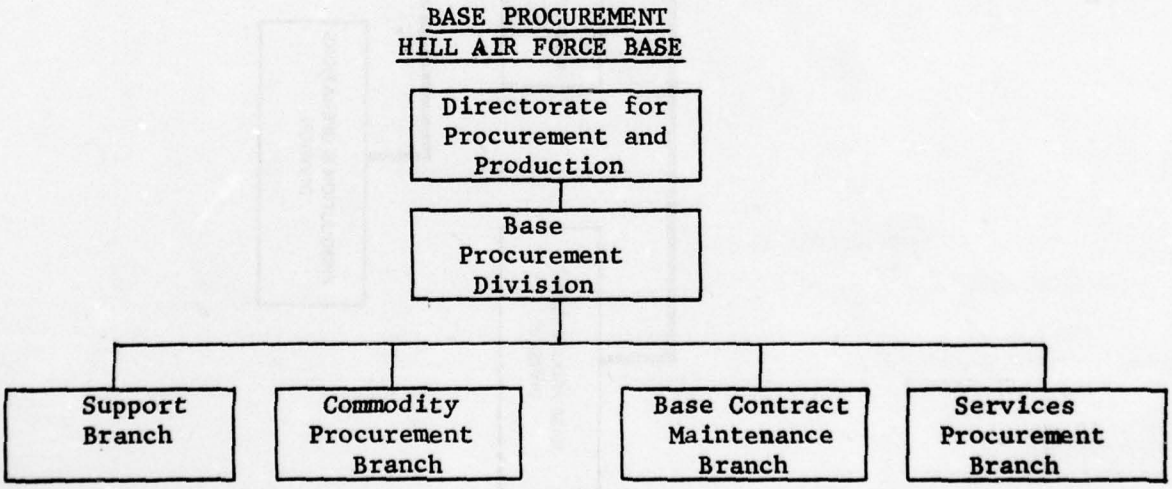



Figure XI-7

6. Basic Supply Statistics

| | Depot Supply | LP |
|---|---|---|
| Number of Line Items | | |
| Installation Total | 290,684 1/ | |
| Base Civil Engineer | 4,831 | 4,462 |
| Value of Demand, FY 1975 ($000) | | |
| Installation Total | $70,106 | $6,533 |
| General Support Division | ($24,550 1/) | |
| System Support Division | ( 45,556) | ($6,533) 2/ |
| BCE | $909.4 | $861.1 2/ |
| Procurement Value, FY 1975 ($000) | | |
| Installation Total | $25,156 3/ | $6,999 |
| BCE | 930.2 | 1,056.8 |

1st Quarter FY 1976, Monthly Average Sales, General Support Division

| | Amount ($000) | % |
|---|---|---|
| BCE | $80 | 4.1 |
| Total | $1,955 | |

1/ Includes LP items and approximately 150,000 items with no on-hand stocks.
2/ Obtained from COCESS, except for $17,600 obtained by BCE from COPARS.
3/ General Support Division only.

7. Supply Operating Costs. Operating costs for the Depot Support Branch of the Depot Supply Division, for the first quarter, Fiscal Year 1976, were as follows:

| | |
|---|---|
| Salaries | $443,882.00 |
| Supplies | 2,763.83 |
| Vehicular POL (est) | 4,000.00 |
| Total | $450,645.83 |

B. BASE CIVIL ENGINEER DATA

1. Functions and Operations

a. Type of Work. The Base Civil Engineer maintains the installation real property facilities such as buildings, roads, grounds,

power lines, refrigeration, heating, water and sewage plants, and family housing. Work falls into three general categories which are as follows:

(1) Emergency Service Calls--Work that is considered to be an emergency and needs immediate attention because of health and safety considerations. Examples of emergency service call work are repairs of heating, water and refrigeration systems, and correction of electrical power failures. Emergency service call work is to be completed within 48 hours. Materiel for this type of work is drawn from service trucks, Do-It-Now (DIN) trucks, or bench stock. Work that turns out to be beyond the emergency service call capability can become a job order or work order.

(2) Direct Scheduled Work--Work that is received, consolidated, estimated, and scheduled for accomplishment. Direct scheduled work includes the following:

(a) Fast Action Service Technique (FAST). The FAST method applies to urgent, but not emergency, work that will not exceed two man-hours per trade. FAST work is to be accomplished within five days.

(b) Hopper Technique. Work that is not eligible for FAST classification or inclusion in the In-Service Work Plan (IWP), also is not identified for accomplishment by a Structural Maintenance and Repair Team (SMART). Hopper work is collected and held for specific time periods. It is to be accomplished within 28 days.

(c) Structural Maintenance and Repair Team. SMART work technique is utilized for high use areas such as dormitories, dining halls, and service clubs. The SMART team usually consists of a crew of varying craftsmen that can perform minor repair, like replacing or repairing doorknobs, leaking plumbing, or inoperative electric lighting switches. Work frequently is of a recurring nature and pre-identified by an inspection schedule.

(3) Work Orders/Job Orders--Work order/job order work is separately identifiable, requires planning, ordering of materiel and possible interface of two or more shops. A job order is usually a one shop job that can be accomplished with on-hand materiel. A work order is more detailed than a job order and of a greater magnitude. Work orders usually require a drawing or sketch and a Bill of Materials (BOM).

b. Workload Generation. Work is generated as follows:

(1) Annual building inspections which point out day-to-day type work.

(2) Requests to service desk by telephone for emergency service type work.

(3) Requests submitted by customers on AF Form 332 (Work Request) for work order/job order type work.

(4) Job order type work is generally initiated by preparation of AF Form 1879 (Base Civil Engineer Job Order). Job orders are small jobs that can be performed by a single shop using bench stock.

(5) Work orders require the preparation of AF Form 327 (Base Civil Engineer Work Order). The approved AF Form 327 is the authorization to perform the work discussed on the document. The idea of the work to be done is referred to a planning technician who describes the work and prepares the following:

(a) AF Form 1081 (Job Phase Calculation Sheet) which describes the work and tasks to be performed.

(b) AF Form 1445 (Materials and Equipment List) which lists the items required for the work.

c. Scheduling

Work accomplishment depends upon an organized mix of man-hours and materials that requires detailed scheduling. Work is initially programmed on an annual basis and is carried out by the In-service Work Plan which is prepared on an AF Form 919 (In-service Work Plan). The IWP is programmed on a month to month basis. The IWP provides a means whereby man-hours for job orders/work orders are computed after reserved man-hours (operation and service, service calls, equipment maintenance, direct scheduled work and recurring work) are subtracted from projected available man-hours. The portion of the IWP pertaining to job orders/work orders is further managed by the Work Control Center. The center consists of a series of visual chart boards which reveal the status of IWP work for the current month and 6 future months.

Man-hours expended for different types of direct work during Fiscal Year 1975 are estimated as follows:

| | % of Man-hours | Cost of Man-hours |
|---|---|---|
| Operation and Service | 27.8% | $178,155 |
| Direct Scheduled Work | 27.0 | 173,620 |
| Recurring Maintenance | 15.6 | 100,415 |
| IWP Job Orders | 10.0 | 64,136 |
| IWP Work Orders | 19.6 | 125,680 |
| Total | 100.0% | $642,006 |

d. Rescheduling. A variety of reasons, e.g., command interest, weather, changes in scope of work and supply delays can cause a rescheduling of work. Normally it is planned to have materiel and supplies on hand before work is scheduled. Work orders are rescheduled when the estimated delivery dates of materiel and supplies are unfavorable. The activity maintained no records from which man-hour losses or customer dissatisfaction from work rescheduling could be measured.

2. Supply Source

a. Contractor Operated Civil Engineer Supply Store (COCESS). The BCE depends to a large extent on a local purchase COCESS located on the installation. Workmen with approved work orders can draw from the COCESS which contain about 900 line items. The BCE acquired materiel valued at $843,500 during Fiscal Year 1975. The materiel is purchased with O&M funds when issued from the COCESS. Stock levels are determined by the contractor; however, the BCE provides suggested levels.

b. Base Supply. Items not provided by the COCESS are requisitioned from base supply by use of AFLC Form 244. Items frequently requisitioned are engineering and janitorial supplies which are stock funded until purchase by the BCE.

c. Work Center Operating Stocks. Operating stocks are located in the respective work centers and are BCE owned. The items are portions left over from unit packs or rolls, e.g., several feet of wire, or a number of screws from a box. The value of the stocks is unknown but considered to be inconsequential. Levels are not maintained for the items. Mechanics use operating supplies as required without documentation.

d. Bench Stock. A bench stock (items not available from the COCESS) is maintained in the BCE area. Bench stocks number approximately 1,995 items with a value of $53,269. Value of bench stock

issues during Fiscal Year 1975 was $206,400. Bench stock is O&M funded by the BCE when issued from base supply. Plans were being formulated to establish a centralized BCE bench stock.

e. Residual Area. Supplies and materiel that are left over from completed jobs and work orders are accumulated and held for future use. The items are applied to work orders whenever possible. No actual record is maintained but it was estimated that items in the residual area have a value of $50,000. Items are O&M funded and belong to the BCE. Value of items used from the residual area are posted to AF Form 1469 (Materials Cost Transfer For BEAMS) and included in the accounting system. Items are held for approximately 180 days, and turned in to base supply if no foreseeable need exists. During Fiscal Year 1975 the following dollar value of stocks was turned in:

| | | |
|---|---|---|
| With credit | $657 | |
| Without credit | 20,000 | (estimate) |
| Total | $20,657 | |

The BCE also turned in to the Defense Property Disposal Office (DPDO) Ogden excess materiel estimated to be worth $75,000. The excesses generated from installation demolitions. Items turned over to the DPDO during 1975 had a value of $7,716.

f. Contractor Operated Parts Stores (COPARS). Workmen with approved work orders can draw parts from the installation COPARS. Items drawn are for repair of lawn mowers and miscellaneous vehicle mounted equipment costing less than $300. Materiel and parts acquired from the COPARS in Fiscal Year 1975 had an estimated value of $17,600.

g. Installation Self Service Store. The BCE utilizes the installation self service store as a source for acquiring administrative and janitorial supplies and miscellaneous handtools. Estimate is that items acquired from the self service store have an annual value of $20,000.

h. Holding Area. Items are held in the holding area for planned job orders and work orders. Items are acquired from various inventories; however, COCESS and base supply are the primary sources. Items are drawn from the holding area when the authorized workman signs the materiel control copy of the bill of materials. Materiel and supplies in the holding area are O&M funded.

i. Insurance Items. Items that may be required to maintain the continuous operation of the installation are included in the installation supply inventory. Insurance items currently held in stock total 17 line items with a value of $64,060.

3. COCESS

COCESS is considered a responsive source of supply. A check in July 1975 revealed the following:

From Base Supply - Twenty requisitions per month for one year required an average of 74.06 days for delivery.

From COCESS - Twenty requisitions per month for one year required an average of 17.02 days for delivery.

Prior to COCESS, 10% of the items requisitioned from base supply were cancelled because of deletions from the supply computer. Item had to be reestablished before requisitions could be processed. Under the present COCESS, it is possible to obtain lumber, millwork, sand, gravel, and asphalt more rapidly than through purchasing and contracting. Before COCESS, the wrong items were often provided and it was difficult to make returns to base supply. COCESS can also provide estimated delivery dates based upon a verbal request under the standard supply system the computer had to be queried. During Fiscal Year 1975 materiel and supplies having a value of $843,500 was purchased from the COCESS. The Simmons Construction Company of San Diego, California, has been operating the COCESS since January 1974.

4. Statistics

a. Work Backlog as of 30 June 1975:

| | | |
|---|---|---|
| (1) | Job Orders and Service Calls | 225 |
| (2) | Work Orders | 66 |

b. Dollar comparison of stock funded supply with COCESS/COPARS:

(1) Fiscal Year 1974

| | Budget | Expended |
|---|---|---|
| Stock Fund | $1,982,000 | $2,022,600 |
| COCESS/COPARS | 20,000 | 348,000 |
| Total | $2,002,000 | $2,370,600 |

(2) Fiscal Year 1975

| | | |
|---|---|---|
| Stock Fund | $1,653,800 | $1,247,000 |
| COCESS/COPARS | 600,000 | 861,100 |
| Total | $2,253,800 | $2,108,100 |

(3) Fiscal Year 1976

| | Budget | Expended |
|---|---|---|
| Stock Fund | $1,714,000 | -- |
| COCESS/COPARS | 1,367,000 | -- |
| Total | $3,081,000 | -- |

The above statistics reflect the growth of COCESS/COPARS (COPARS is an inconsequential amount as Fiscal Year 1975 issues value $17,600). Estimate is that COCESS issues have a value of more than $250,000 per quarter.

5. BOM Status (17 October 1975)

a. Materiel Available

| | |
|---|---|
| Work Orders | 87 |
| Job Orders | 64 |
| Service Calls | 19 |

b. Waiting Materiel

| | |
|---|---|
| Work Orders | 80 |
| Job Orders | 77 |
| Service Calls | 79 |

c. Work orders delayed over 180 days - 18.

d. Job orders delayed over 60 days - 21.

e. Delayed work order for family housing - 1.

C. BASE SUPPLY

1. Supply Support to the BCE

The central supply organization providing supply support to BCE is the Depot Supply Division of the ALC Directorate of Distribution. Materiel is provided to the BCE from the following sources, in the amounts indicated for Fiscal Year 1975:

| Source | Amount ($000) | % |
|---|---|---|
| Depot Supply | $1,279.4 | 59.8% |
| Work Orders/Job Orders | (1,073.0) | (50.1) |
| Bench Stock | (206.4) | (9.7) |
| COCESS | 843.5 | 39.4 |
| NPL | (737.5) | (34.4) |
| Stock | (106.0) | (5.0) |
| COPARS | 17.6 | 0.8 |
| Total | $2,140.5 | 100.0% |

In addition, the BCE draws materiel from the Base Service Store.

DSD supports activities assigned Force Activity Designators (FADs) I through V. The BCE, as a unit, is assigned FAD IV. Thus, its routine stock replenishment actions (e.g., bench stock replenishment) would be assigned Issue Priority Designator (IPD) 14. The BCE can use the FAD of the supported activity for specific jobs which can be so identified. However, within the context of the local on-base delivery priorities which have been established by the Air Force, BCE requirements are not authorized to use the 30-minute and one-hour deliveries from DSD.

2. Bench Stock

a. Type of Materiel. Materiel in the bench stock consists of low-cost (although no unit price limitation could be identified), expendable items. Basically, items included in the bench stock are expected to have three demands in 180 days (demands measured at DSD, not at the bench stock bin) which are satisfied by the issue of stock; however, special levels of items can be positioned in bench stock on request of the BCE even without a demand history. Handtools and personal equipment items are excluded from bench stock.

b. Authorized Stock Level. Bench stock is authorized a 30-day stock level, based on bin replenishment not customer issues. This level is based on demand history and is automatically computed by the DSD computer for items placed in bench stock. Replenishment levels are calculated by the computer for all items, including those originally placed in bench stock as a special level. The retention limit for bench stock items is 150% of the authorized level.

c. Stock Replenishment. Bench stocks are replenished based on a weekly walk-through and a monthly inventory. Bench stock bins are labeled with the stockage objective, with the reorder point

established as 50% of the stockage objective. During the weekly walk-through, replenishment actions are taken based on an "eyeball" estimate of the amount of assets on hand compared to the reorder level; the monthly replenishment review consists of an actual inventory of bin contents. Replenishment actions are taken by DSD, although custody and operation of the bench stock is the responsibility of the using organizations (for BCE, operation of bench stocks involves three people on a full-time basis). When bench stock assets for an item have been depleted, subsequent customer requirements are transmitted directly to DSD; if stocks are not available at DSD, the requirement is requisitioned and a backorder is established directly to the specific requiring customer. Routine bench stock replenishment is ordered with an Urgency of Need Designator (UND) of C; if a UND C requirement is backordered, the requirement is upgraded to a UND B after 30 days. Bench stocks with no assets are replenished with UND A.

d. Funding. Bench stock assets are owned by the using organization, and are paid for when the materiel is positioned in the bin. Customer funds are recorded in the supply computer, and the computer checks on customer fund availability before bench stocks are replenished.

e. Excesses. Assets over 150% of the authorized stockage objective are required to be turned in to DSD. The DSD computer checks for requirements elsewhere locally or at the wholesale level--if the item is needed locally, or credit is given by the managing inventory control point for the turn-in, the customer receives credit.

f. Statistics

There were a total of 86 different bench stock locations supported by DSD as of July 1975, in 17 different organizations. The BCE has ten bench stock locations.

As of 15 October 1975, DSD has a total of 13,341 gross line items located in all bench stocks, with an authorized stockage objective of just over $400,000. BCE bench stock contained 1,955 items (14.7% of the total) with an automatic stockage objective of just over $51,000 (12.8% of the total).

3. COCESS

The COCESS operation at Hill Air Force Base is limited to items coded for local purchase. Supply involvement in the COCESS operation is to insure that items supplied by the COCESS are identified for local purchase, and are items used by BCE.

For Fiscal Year 1975, the COCESS provided $843,500 (39.4%) of the $2.1 million used by the BCE (with the COPARS providing an additional $17,600--0.8%).

Although COCESS represents a significant portion of the supply support received by the BCE, very little impact was reportedly felt by the Hill Air Force Base supply operation due to the small portion (4.1% during the first quarter, Fiscal Year 1976) BCE represents of the total supply sales.

4. Depot Supply Division

a. Type of Materiel. DSD serves as a direct source for materiel which is not obtainable through one of the other established sources for materiel support to the BCE--that is, any materiel not available to the BCE from the COCESS, bench stock, or the Base Service Store, can be requisitioned directly from DSD.

b. Authorized Stock Levels

Stockage criteria for items to be held by DSD are: recoverable items (i.e., those subject to repair), three demands in 180 days; Economic Order Quantity (EOQ) items, five demands in 180 days. These criteria were expected to change shortly to two demands in 180 days, and three demands in 180 days, respectively.

The Air Force uses a standard Wilsonian EOQ formulation in the management of their nonprogram related items. In this computation, the cost to order/cost to hold factor is calculated at a value of 4.4. Thus, the EOQ formulation becomes

$$EOQ = \frac{4.4\sqrt{\text{Annual Demand Value}}}{\text{Unit Price}}$$

The safety level for EOQ items is, similarly, a square root function of the demand, with a minimum safety level of 15 days. As of the visit, the Order and Ship Time was a standard 30 days, but it was planned to convert this to actual.

Levels for recoverable items consider the daily demand for serviceables, the portion of the total carcasses which are locally repaired and their repair time, and the quantity required to be obtained from system stocks and the pipeline time of those replacements.

Files are screened daily, and levels are recomputed whenever on-hand assets fall below the reorder point or rise above the

requisitioning objective. When appropriate, automatic replenishment requisitions are produced by the computer.

In addition to stock levels based on demand history, special levels can be established to identify quantities to be held by the DSD even though not supported by demand experience. These levels are for items which would otherwise not be authorized any stock balance; no provision is made for additive levels in addition to those based on demand history. There were a total of 1,683 items with "special levels" at DSD; of these, 27 were being held for BCE.

c. Funding. Materiel held by the DSD is within the stock fund--Air Force-managed items are within the System Supply Division (SSD) while items managed by other inventory control points (e.g., Defense Supply Agency (DSA), General Services Administration (GSA)) and local purchase items are held within the General Support Division (GSD) of the Air Force stock fund.

5. Base Service Store (BSS)

a. Type of Materiel. The BSS is a self service facility which is the source of administrative and janitorial supplies for all activities on Hill Air Force Base. The BCE primary interest in the BSS is in terms of the janitorial supplies. A portion of the janitorial function on Hill Air Force Base is accomplished through contract, and the BCE is responsible for furnishing the Government Furnished Materiel (GFM) janitorial supplies.

b. Authorized Stock Levels. The BSS contains total base stocks of the items intended to be carried in that store. Its stock level computations are the same as those described above for the Depot Support Division for EOQ items. In addition, the store will carry small quantities of nonstock numbered items for which the unit pack is greater than the customer requirement. Quantities of these items beyond customer immediate requirements are held by the BSS on its open shelves; since there is no store catalog or inventory, the remaining stocks of such items are generally only drawn out by the unit which originally established the requirement.

c. Funding. Materiel in the BSS is in the Air Force stock fund, and is paid for by customer funds at the time that it is drawn.

d. Issues. The BSS is a self service store, with materiel displayed on open shelves. Transactions are recorded in money-value only terms at the check-out counter, where the total value of the sale is charged against the purchaser's account.

e. Statistics

The BSS stocks approximately 1,800-1,900 line items.

BSS sales for the six-month period April-September 1975 totaled just over $40,000.

BCE personnel estimated that about $20,000 was expended through the BSS per year.

6. Supply Sources. Materiel provided to the BCE by DSD was derived from a number of sources. The following table shows the sources of this materiel for the month of September 1975:

| Source | Amount | % |
|---|---|---|
| Local Purchase | $12,870 | 16.2% |
| DCSC | 18,723 | 23.6 |
| DESC | 1,841 | 2.3 |
| DGSC | 7,777 | 9.8 |
| DISC | 7,326 | 9.2 |
| Diesel | 2,286 | 2.9 |
| Mogas | 7,506 | 9.5 |
| DPSC (textiles) | 3,621 | 4.6 |
| GSA | 17,419 | 21.9 |
| Total | $79,369 | 100.0% |

D. BASE PROCUREMENT

1. Local Procurement

The following are types of transactions, and the dollar value of these transactions processed by the Procurement Division in Fiscal Year 1975.

| Transactions | Dollar Value | % |
|---|---|---|
| Contracts | $9,334,177 | 27.9% |
| Purchase Orders, Delivery Orders, BPAs | 12,342,762 | 36.8 |
| Commissary | 9,613,902 | 28.7 |
| Medical | 14,334 | 0.0* |
| Transportation | 347,367 | 1.0 |
| Nonappropriated Fund | 384,841 | 1.2 |
| COPARS (vehicles) | 432,529 | 1.3 |
| COCESS | 1,041,423 | 3.1 |
| Total | $33,511,335 | 100.0% |

*Less than 0.005 of 1%

The above procurement instruments were used to make purchases of supplies and services. Conditions under which these instruments are used are as follows:

-- Contracts are used for purchasing a single commodity or service when the purchase is beyond Blanket Purchase Agreement (BPA) authority.

-- BPAs are used for purchases up to $2,500. These purchases may be made up to $500 without competition, and over $500 to $2,500 with competition.

-- Purchase orders and delivery orders are used for purchases over $2,500, and/or when the contracting officer desires to bind a contractor to a formal contractual management.

The procurements made under the commissary, medical, transportation, nonappropriated fund, COPARS, and COCESS contracts are considered decentralized procurements. This means that the Procurement Division issues the Invitation for Bid, and awards and administers the contract, but is not involved in the individual purchase actions of the contract except for validating sales slips.

The Procurement Division is furnished with fund citations prior to making purchases with the above purchase instruments. If the purchase is being made for the stock fund, a stock fund citation is provided. If a contract is let for an arrangement such as COCESS, an O&M fund citation is furnished.

2. The COCESS Contract

The COCESS contract was first initiated in December 1973, and has been functioning under the same contractor since. Items which may be purchased under the contract include those which are coded in supply catalogs as having a local purchase source of supply and items which are not listed in supply catalogs. Items having a GSA or DSA source of supply in supply catalogs are not authorized for purchase through the COCESS except in cases of emergency.

Prior to letting the contract, a list of items is furnished to the contractor informing him of the items that the Civil Engineer would like to have immediately available. This list is known as a Materiel Requirements Listing (MRL) and as of August 1975 consisted of 974 line items. The contractor is required by the contract to maintain 80% of the items in stock. As of August 1975, the contractor had 76% (740) of the items on hand, and was coordinating closely with the Civil Engineer to remove low turnover items from the MRL.

In Fiscal Year 1975, $1,041,423 worth of materiel were purchased from the COCESS. The Civil Engineer was responsible for purchasing $843,500 of the total while other organizations purchased the remainder. Of the Civil Engineer purchases, $106,000 was spent for items on the MRL, and $737,500 was spent for items not on the MRL.

Perhaps the greatest factor on which the award of the contract is based is the compensation paid to the contractor for obtaining items not on the MRL. This compensation is a surcharge paid to the contractor which is based on a percentage of monthly sales as follows:

| | |
|---|---|
| 0--$25,000 | 10% |
| $25,001-- 50,000 | 9 |
| 50,001-- 60,000 | 8 |
| 60,001-- 70,000 | 7 |
| 70,001-- 75,000 | 6 |
| 75,001-- 80,000 | 5 |
| $80,001--$95,000 | 4% |

With the Civil Engineer purchasing $737,500 worth of items not on the MRL in Fiscal Year 1975, the average monthly sales to the BCE are computed as $61,458. This amount of sales entitles the contractor to a 7% surcharge ($4,302 per month, or $51,624 per year).

Moreover, the contractor is paid a service charge of $5,800 per month or $69,600 per year for operating the store.

The total amount paid to the contractor just for providing supplies to the Civil Engineer follows:

| | |
|---|---|
| $ 51,624 | Surcharge |
| 69,600 | Service charge |
| $121,224 | Total |

As stated at the beginning of this paragraph, the same contractor has had the contract since it was established in December 1973. This contractor, competing against three other contractors for the contract, bid $77,574 less than the next lowest competitor.

According to records maintained by the Procurement Division, responsiveness for obtaining the nonprice listed items through COCESS (items not on the MRL or not stocked in the COCESS) was 17.02 days. As a means to compare responsiveness through COCESS with responsiveness through normal procurement methods, 133 BPAs, purchase orders, and delivery orders for local purchase actions made by the Procurement Division were reviewed during the field research visit of 14 to 17

October 1975. For the 133 transactions the response time, measured from the time documentation requesting supplies was received by the procurement function, to the time the supplies were received, averaged 66 days.

3. Personnel Costs

The Commodities Branch is the function involved in purchasing supplies for the base, and is the office which administers the COCESS contract. Branch personnel estimated that administration of the COCESS contract consumes about 70% of the time of a GS-06 and 5% of the time of a GS-09. Based on those estimates personnel costs of administering the COCESS contract are as follows:

| | | |
|---|---|---|
| 70% of GS-06 | - | $7,516 per year |
| 5% of GS-09 | - | 728 per year |
| Total | | $8,244 per year |

In addition, the personnel cost within the Accounting and Finance Office for daily processing of COCESS sales slips, end of month balancing, payment processing, and certification of funds is estimated to be $2,064 per year.

In addition, the following Materiel Control personnel are involved with processing requests for the Civil Engineer supplies.

| Grade | Number | Annual Salary | Total |
|---|---|---|---|
| GS-09 | 1 | $14,563 | $14,563 |
| GS-06 | 1 | 10,737 | 10,737 |
| GS-05 | 2 | 9,632 | 19,264 |
| GS-03 | 1 | 7,664 | 7,664 |
| WG-07 | 1 | 11,482 | 11,482 |
| WG-06 | 1 | 10,920 | 10,920 |
| E-5 | 1 | 7,168 | 7,168 |
| E-4 | 1 | 6,289 | 6,289 |
| E-3 | 1 | 5,292 | 5,292 |
| E-2 | 1 | 4,831 | 4,831 |
| Total | | | $98,210 |

Since 40.7% of the total Civil Engineer O&M expenditures were made through the COCESS, it is assumed that 40.7% of the personnel expense is attributed to obtaining supplies from the COCESS. This is computed as follows:

$98,210 x .407 = $39,971.

The personnel costs of local purchase of supplies for the BCE is as follows:

| | |
|---|---|
| $8,244 | Procurement Division |
| 2,064 | Accounting and Finance |
| 39,971 | BCE Materiel Control |
| $50,279 | Total Personnel Costs |

E. INDIVIDUAL ITEM RESEARCH

Nine long-standing work orders were reviewed. Findings were as follows:

a. Work order was held up for explosion proof conduit. Item was delayed because wrong source was shown on AF Form 1445. This has since been reordered through COCESS with estimated delivery date of 24 October 1975.

b. Work order was held up for 100 feet of rain gutter. The gutter was received but cannot be located. It was reordered through COCESS as an emergency on 15 October 1975.

c. Work order was held up for 2 each, electrical heaters, 5000 watts, thermostat and breakers. The items were required by the BCE on 28 September 1975. The heaters were ordered from COCESS on 21 August 1975 with estimated delivery date of 14 September 1975. The heaters had not been received as of 17 October and followup was being initiated.

d. Work order was held up for three items: (1) standby power pack and charger unit - 1 each, (2) diode - 5 each, (3) resistor - 2 each. Items were required by the BCE 9 September 1975 and were ordered from COCESS 21 August 1975. Items were delayed and estimated delivery date was 10 October 1975. Followup indicated delivery would be made about 17 October 1975.

e. Work order was delayed but not for materials. Work was scheduled to be completed with another work order for which materials are not complete.

f. Work order was held up due to COCESS providing wrong item. Wrong item received, The correct item was reordered on 10 February 1975. An estimated delivery date was not available during the visit.

g. Work order was help up for three items: (1) meter base, gas main, (2) electric motor, (3) transformer. Work order is similar

to a prior work order that was cancelled. Items from the prior work order were applied to this and it is scheduled for accomplishment during January 1976. Items were taken from the residual holding area and purchased locally.

h. Work order had a "as soon as possible" requirement; however, Bill of Materials had not been determined by planning. Work order was to be expedited.

i. Work order was considered incomplete because it did not pass a security inspection. Work order had to be done over and additional materiel were ordered from COCESS. Follow-up was initiated to determine new estimated delivery of a standby power pack and eight detection units.

Examples of items difficult to obtain are:

Circuit breakers
Large water main valves
Electrical controls of a specific manufacturer
Heating, humidity, and ventilation systems and components.

## CHAPTER XII

## DOVER AIR FORCE BASE, DELAWARE

### A. MANAGEMENT DATA

1. Installation Organization. The organization of Dover Air Force Base is shown in Figure XII-1. The mission of the 436th Military Airlift Wing (MAW) is to attain and maintain a high state of readiness for:

-Deployment and redeployment of combat forces, worldwide
-Joint strategic airlift operations/training
-Special airlift operations
-Logistical airlift

Several unique features of the 436th MAW are:

-Largest cargo port on East Coast
-Only all C-5 wing
-2nd largest industry in state
-Construction activity Fiscal Years 1969 to 1975 - $68 million

The base population at Dover Air Force Base is:

| | |
|---|---|
| Officers | 491 |
| Airmen | 4,900 |
| Civilian | 1,894 |
| Working Population | 7,285 |
| Dependents | 10,677 |
| Total | 17,962 |

2. Base Supply

a. Standard Base Supply System (SBSS). At Dover Air Force Base, the SBSS provides central supply support to on base activities. The SBSS is a customer-oriented organization whose principal procedures cover the basic supply requirements to order, receive, store and issue property. Figure XII-2 portrays the Dover Air Force Base base level SBSS organization.

The SBSS uses the UNIVAC 1050-II computer for storage and maintenance of supply records and updates the inventory records automatically once a basic transaction such as an issue, requisition, turn in, etc., is fed into the computer. The system is considered to be "on-line" which means that all records (financial and supply)



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DOVER AIR FORCE BASE

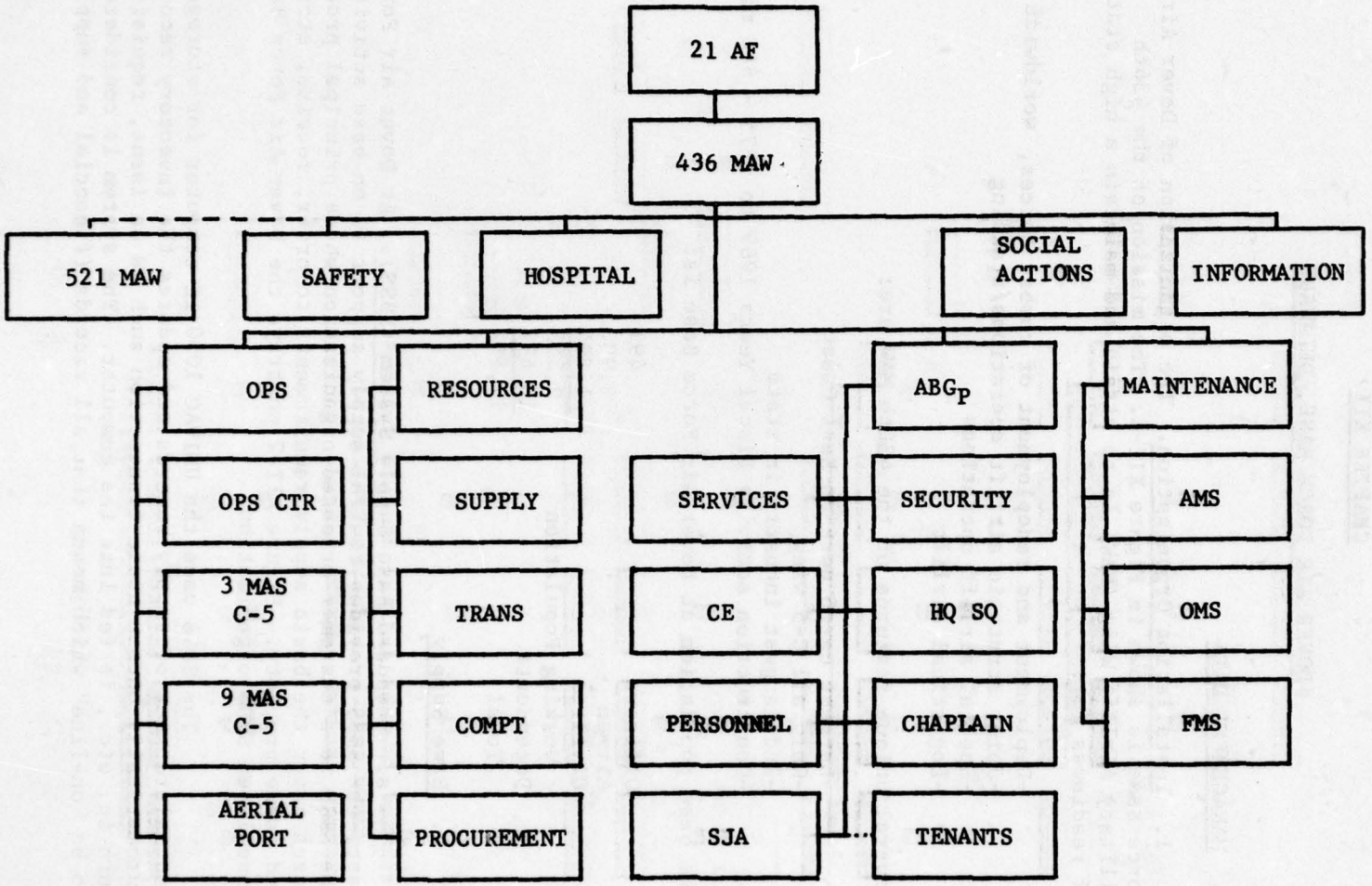



Figure XII-1

BASE LEVEL SUPPLY ORGANIZATION

DOVER AIR FORCE BASE

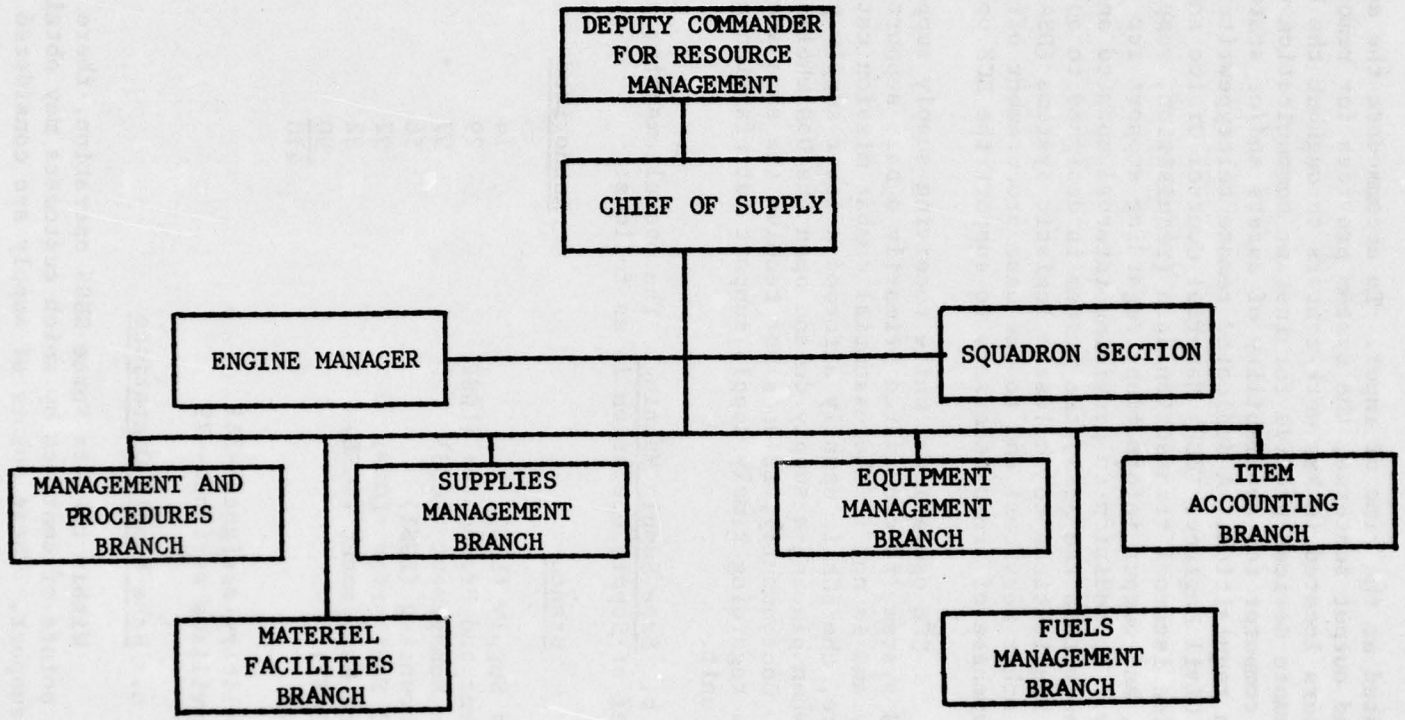



Figure XII-2

are updated at the time of input. To accommodate the automatic input and output features, the system provides for remote teletypewriters located in key work centers throughout the base. These remote devices provide for instant communication with the central computer for availability of assets and/or status of items on requisition. A dedicated remote teletypewriter is located in Base Civil Engineer (BCE) Materiel Control Office and is used to provide internal transaction data (requisition, supply status, updates, and output information) regarding support for the BCE activity. In addition to providing internal updated and output data used within the SBSS, the system is designed to automatically provide requisitions to wholesale logistic systems (DSA, GSA, AFLC depots, other Services) and to the base procurement office for local purchase of items necessary to support the BCE operations.

BCE operations, while receiving supply support through the SBSS system, is considered primarily a base support related activity and is not in the essential combat mission category. Therefore, the BCE is usually afforded a lower supply priority rating when placing a supply demand upon the DoD wholesale supply system. Consequently, it does not receive the same amount of emphasis regarding timely supply support satisfaction as the combat related unit.

b. Base Supply Manning. The overall manning strength for the Chief of Supply operation is as follows:

| Branch | Authorized | Assigned |
|---|---|---|
| Chief of Supply (LGS) | 14 | 17 |
| Management and Procedures (LGSP) | 29 | 29 |
| Supplies Management (LGSS) | 97 | 89 |
| Item Accounting (LGSI) | 56 | 50 |
| Materiel Facilities (LGSM) | 92 | 106 |
| Equipment Management (LGSE) | 32 | 30 |
| Fuels (LGSF) | 90 | 99 |
| Total | 410 | 420 |

Total military assigned--341
Total civilians assigned--79

c. Base Supply Operations

Within the Air Force SBSS operation, there are four primary points of contract by which customers may obtain their supply support. These points of supply are considered as retail type operations.

(1) The Base Service Store--for housekeeping and administrative supplies. (Within this concept, the BCE is assigned a separate supply support operation to provide peculiar items required for BCE Bills of Materials and is located near or adjacent to the BCE materiel control operation.)

(2) The Tool Issue and Individual Equipment Section--for common hand tools and such items as goggles, face mask, etc.

(3) Demand Processing--for ordering supplies not provided through the Base/BCE Service Store or Tool and Equipment Section.

(4) Equipment Management Office--for ordering equipment items such as shop equipment, desks, test sets, etc.

d. Base Supply Organization. Of the six branches in Base Supply, the Supplies Management Branch (Figure XII-3) contains most of the support sections that are directly involved in supply support to the BCE.

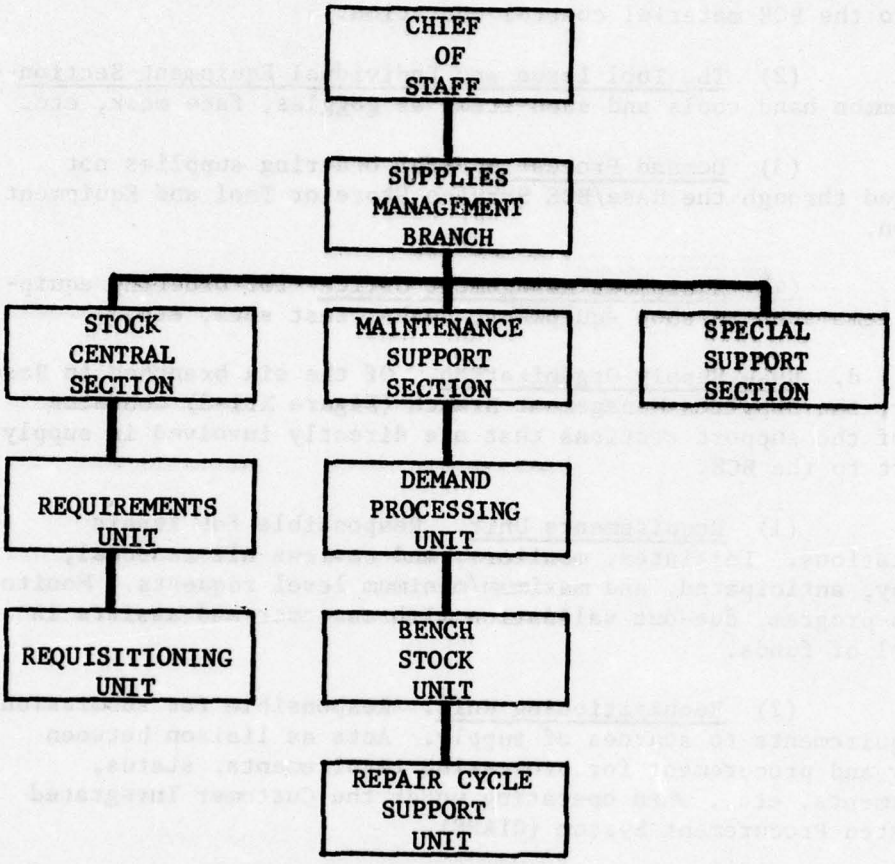
(1) Requirements Unit. Responsible for levels computations. Initiates, monitors, and reviews all seasonal, standby, anticipated, and maximum/minimum level requests. Monitors excess program, due-out validation with customer and assists in control of funds.

(2) Requisitioning Unit. Responsible for submission of requirements to sources of supply. Acts as liaison between supply and procurement for processing requirements, status, adjustments, etc., when operating under the Customer Integrated Automated Procurement System (CIAPS).

(3) Demand Processing Unit. Acts as the primary (but not only, e.g., base service store) point for submission of expendable items requests. Insures processing of all issue requests; verifies urgency of need and provides availability of assets for demands received via radio, telephone, or letter.

(4) Bench Stock Unit. Establishes bench stocks in coordination with supported units. Inventories, replenishes, delivers, and bins items. Bench stocks consist of a 30-day supply of low-cost, expendable items (XB3), which, due to repetitive consumption are prepositioned in a central BCE work/holding area in advance of actual need. The use of bench stock procedures allows the using activity to maintain a ready stock of necessary supplies without repeated individual issue requests to base supply and significantly reduces the base supply workload through bulk (infrequent) issues of these low-cost items.

SUPPLIES MANAGEMENT BRANCH
DOVER AIR FORCE BASE




Total personnel assigned--97

Figure XII-3

(5) Repair Cycle Support Unit. Used primarily to monitor repair cycle assets for which replacement items must be returned to the Central Supply System. Very little activity for this unit is directly associated with the BCE Real Property Maintenance Activity (RPMA) program.

(6) Special Support Section. This section does not provide support to the BCE RPMA program. Workload relates to supply support for worldwide Military Airlift Command (MAC) aircraft bases.

3. Base Procurement

a. Organization and Staffing. As of September 1975 the Base Procurement Office was organized and staffed as follows:

| Organization | Military | Civilian | Total |
|---|---|---|---|
| Office of the Chief | 2 | 3 | 5 |
| Supplies Branch | 5 | 2 | 7 |
| Services Branch | 0 | 4 | 4 |
| Contract Administration Branch | 6 | 2 | 8 |
| Operations Branch | 4 | 5 | 9 |
| Total | 17 | 16 | 33 |

b. Procurement Support.

The BCE and Base Supply personnel at Dover Air Force Base estimated that approximately 35% of the items and approximately 50% of the dollar value of materiel provided to the Civil Engineer was attained through local purchase; the estimate was based on experience with BCE peculiar items.

At the time of the visit, Dover Air Force Base had a Contractor Operated Parts Stores (COPARS) contract, estimated at $165 thousand annually. The COPARS contract was administered by one person, using approximately 25% of a man-year. The Base was in the process of developing plans, including a Materiel Requirements List (MRL), for obtaining a Contractor Operated Civil Engineer Supply Store (COCESS). It was anticipated that the COCESS would be established by July 1976.

Local purchase in support of the Base, including the BCE, was being effected by the Base Procurement Office. Procurement operations were being performed in accordance with the Air Force Customer Integrated Automated Procurement System (CIAPS).

4. Basic Supply Statistics (Fiscal Year 1975)

| Total Number Line Items (as of 30 Jun 75) | CP | LP | GSA |
|---|---|---|---|
| Installation Total | 38,970 | 5,044 | 4,376 |
| BCE Total (estimate) | 1,089 | 798 | 394 |
| VAD Fiscal Year 1975 | | | |
| Installation Total | | Not available | |
| BCE Total | | Not available | |
| Total Value of Inventory | | | |
| Installation Total | $ 630,752 | $ 174,889 | $ 219,947 |
| BCE Total (estimate) | $ 138,765 | $ 38,475 | $ 48,338 |
| Value of Fiscal Year 1975 Procurement | | | |
| Installation Total | $3,062,695 | $2,116,395 | $1,155,878 |
| BCE Total (estimate) | $ 443,286 | $ 487,129 | $ 43,842 |
| Total BCE Expenditures (Actual) | $ 974,257 | | |

5. Supply Operating Cost (Fiscal Year 1975)

| | | Overall | BCE |
|---|---|---|---|
| Personnel: | Military | $3,572,548 | $38,064 |
| | Civilian | 1,287,765 | 49,754 |
| | TDY | 3,247 | 0 |
| | Total | $4,863,560 | $87,818 |
| Rental Equipment | | 2,546 | |
| Contract Maintenance | | 10,096 | |
| | | $ 12,642 | |
| Supplies | | 97,868 | |
| Equipment | | 15,578 | |
| | | $ 113,446 | |
| Grand Total | | $4,989,648 | |

(NOTES) The above BCE figures are estimates based on percentage of total operating costs. Not all duties as described below are full time.

6 Military (4 Sergeants (E-4s) and 2 Staff Sergeants (E-5s))

Duties: Inventory and Delivery of Bench Stocks; binning of items and maintaining BCE bench stocks; records clerks and warehouseman.

6 Civilians (4 GS-04 and 2 GS-05)

Duties: Receiving, storage and issue clerks; wash post and local procurement clerks; funds clerks, delivery and transportation personnel.

B. BASE CIVIL ENGINEER (BCE) DATA

1. Functions and Operations:

a. Type of work. The Base Civil Engineer is responsible for maintenance and repair of base facilities which includes roads, grounds, railroads, buildings and family housing. The BCE operates the utility systems, provides services such as entomology, termite and pest control, refuse collection, and accomplishes minor construction. Work falls into three general categories as follows:

(1) Service Calls--Work that is considered to be an emergency and needs immediate attention. This type of work is to be accomplished within 48 hours.

(2) Direct Scheduled Work--Work that is received, consolidated, estimated and scheduled for accomplishment. Direct scheduled work includes the following:

(a) Fast Action Service Technique (FAST). The FAST method applies to urgent, but not emergency, work that will not exceed two man-hours per trade. FAST work is to be completed within five days.

(b) Hopper Technique--Work that is not eligible for FAST classification or inclusion in the In-service Work Plan (IWP), also is not identified for accomplishment by a Structural Maintenance and Repair Team (SMART). Hopper work is collected and held for specific time periods. Hopper work is to be accomplished within 28 days.

(c) Structural Maintenance and Repair Team--Work that entails the capability of several crafts to perform minor maintenance and repair on a recurring basis. Work is pre-identified by an inspection schedule.

(d) In-Service Work Plan--Work that requires a large effort but can be held for accomplishment. IWP work doesn't require extensive planning or interface with other shops. Examples of IWP work are cleaning out storm drains or patching streets.

(3) Work Orders/Job Orders--Work that is separately identifiable, requires considerable planning, ordering of materiel, possible interfaces of two or more shops, and frequently has a high dollar cost. Work orders, as a rule, cover major work and require a large number of items and materiel; whereas, job orders are minor work that requires few items and materiel.

b. Workload Generation.

(1) Service Calls--Requirements are called into the service desk. AF Form 1879 (Service Call/Job Order Record) is prepared by service desk and forwarded to the appropriate shop (work center). Shop personnel visit the site and review the work to be done. When supplies are required, the Materiel Control Section is advised. Bench stock, residual area and bulk stocks are then screened for availability. Available supplies are transferred to the job order by AF Form 1469 (Material Cost Transfer for BEAMS). When supplies are not available, the requirement is input into the 1050 Remote to Base Supply. Items in stock are issued, or request is hand-carried to supply and item is picked up. Items not in stock are requisitioned by Base Supply through procurement or appropriate inventory control point. Supplies for emergency type work are assigned priority code 2.

(2) Direct Scheduled Work--Supply procedures for direct scheduled work are basically the same as for service calls except that a priority code 7 is assigned if the work is not considered mission essential.

(3) Work Orders/Job Orders--Customers request work by submission of AF Form 1135 (Real Property Maintenance Request). Work requirements can also be generated in-house. Work considered appropriate for accomplishment is described on a prepared AF Form 327 (Base Civil Engineer Work Order). Materiel required is

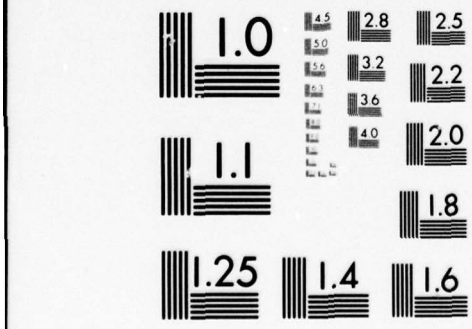
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MATERIEL SUPPORT TO CIVIL ENGINEER OPERATIONS. VOLUME II. FIELD--ETC(U)
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listed on AF Form 1445 (Materials and Equipment List). Supplies and materiel for work orders/job orders are assigned priority 12 or 14. Nonstocked numbered items are requested by the planner who prepares DD Form 1348-6 (Non-FSN Requisition Manual). The BCE Materiel Control Branch performs research to determine if item is assigned a National Stock Number (NSN). Item request is routed to base supply for additional research for NSN or assignment of local purchase and/or part number. Request is returned to the BCE for input of the requirement into the 1050 Remote for action to be taken by base supply. Supply items required for work orders or job orders are acquired from various sources and placed in the holding area until the work is scheduled for accomplishment.

c. Scheduling. Work is scheduled according to the importance of the job to be accomplished. Man-hours are determined by preparation of AF Form 919 (In-service Work Plan). Projection of personnel expected to be available is translated into man-hours. Man-hours for work that must be done, (e.g., operation of the water plant, emergency, recurring maintenance and direct scheduled work) are subtracted from the total man-hours. The remaining man-hours are assigned to job orders and work orders. Percentage of man-hours expended for different types of work for Fiscal Year 1975 are as follows:

| Type of Work | % of Man-hours | Direct Man-hours |
|---|---|---|
| Emergency/Service Calls | 6.1 | 14,950 |
| Direct Scheduled Work | 34.1 | 83,573 |
| Recurring Maintenance | 16.7 | 40,929 |
| Job Orders/Work Orders | 43.1 | 105,630 |
| | 100.0 | 245,082 |

Total man-hours for Fiscal Year 1975 had an estimated value as follows:

440,314 man-hours
$ 9.906 average pay per hour
$4,361,750

d. Rescheduling. Rescheduling of work may become necessary because of command interest, inappropriate materiel, or insufficient man-hours. Command interest work is expedited to the fullest extent possible. Work orders that are delayed because of materiel or man-hours are deferred until a future month if this can be done within work priorities. Materiel

problems cause rescheduling of eight to ten jobs a month (average 40 to 45 work orders/job orders initiated per month). Rescheduling causes customer dissatisfaction, but labor losses are minimal since personnel can be diverted to accomplish other work orders and/or job orders.

2. Supply Support

a. Organization. The Civil Engineering Organization has an in-house Materiel Control Section of nine personnel as follows:

MATERIEL CONTROL SECTION PERSONNEL STAFFING

| | Civilian | Military |
|---|---|---|
| Supervisory, General Supply | 1 | |
| General Supply Assistant | 1 | |
| Supply Clerk | 2 | |
| Warehouseman | 3 | 2 |
| Total | 7 | 2 |

b. Source of Supplies

(1) Bench Stocks--Supplies located in the materiel control warehouse are referred to as bench stocks. The bench stock consists of items applicable to use primarily for service calls and in some instances job orders and work orders. Bench stocks are managed by the BCE; however, levels are determined by base supply based upon computerized data. The procedure at Dover Air Force Base calls for a daily review of bench stocks to determine if items are out of stock. Base supply initiates requisitioning action to replenish items at a zero level. Bench stocks are BCE owned inventory having an estimated value of $250,000 and consist of over 1,000 line items. Workmen need an approved AF Form 1879 (Service Call/Job Order Record) to draw materiel from the bench stock. Bench stock consumed during Fiscal Year 1975 had a value of $82,000.

(2) Special Levels--Items for standby or contingency support; e.g., electrical motors for heating plants, fire hydrants, and urea for de-icing runways are protected in inventory as special levels. The BCE submits requests for changes to special levels; however, the actual level is the prerogative of base supply. Special level items are base supply stock funded inventory until issued to the BCE. Special level inventory consists of 133 items valued at $49,630.

(3) Residual Area--Materiel left over from completed or cancelled work orders is placed in a special holding area. A listing of the items is prepared and screened for possible use on subsequent job orders or work orders. Items held are floor and ceiling tile, light fixtures, paints, lavatories, concrete blocks and numerous other similar materiel. Items are returned to base supply after being held for six months if no foreseeable need exists. The residual area contains 368 line items and has an estimated value of $10,000 which is BCE owned. Value of items turned in during Fiscal Year 1975 follows:

| | |
|---|---|
| Turned in with credit | $ 9,669 |
| Turned in without credit | 20,222 |
| Total | $29,891 |

(4) Bulk Items--Bulk items such as sand, gravel and lumber are issued to the BCE. Items are requisitioned monthly based on expected requirement, no levels are established. BCE estimated requirements are furnished base supply through input into the 1050 computer by AF Form 1445 (Materials and Equipment List). Value of bulk items on hand could not be estimated with any degree of confidence.

(5) Bills of Materials (BOMs)--BOMs requirements are reflected on AF Form 1445 as a part of a job order or work order and are accumulated in a holding area. Items not available from BCE bench stock or the residual area are requisitioned from base supply. Items are expended to the BCE when received by base supply and transferred to the holding area where they are retained until issued to the workmen. Materiel on hand in the holding area has an estimated value of $300,000 and appliy to 287 work orders/job orders of which 117 are complete.

(6) Contractor Operated Parts Stores--Repair parts for lawn mowers are acquired from the installation COPARS; these parts average 40 line items and $700 per month.

(7) Base Self-Service Store--Miscellaneous administrative and janitorial supplies and hand tools are obtained from the Base Self-Service Store at an estimated value of $3,000 per month.

3. Contractor Operated Civil Engineer Store--A COCESS is not in operation at Dover Air Force Base but a Materiel Requirements List is in the process of being prepared for

approval by the Military Airlift Command, Scott Air Force Base, Illinois. The target date for the establishment of a COCESS at Dover Air Force Base is 1 July 1976.

4. BOM Status

During Fiscal Year 1975 there were 473 work orders accomplished in-house with a materiel requirement of $519,000. At the time of the visit there were 293 work orders that included a BOM. A resume of the work orders from a materiel point of view is indicated below. The column and/or line shown as "other" are those work orders that require funding, planning, additional technical review, approval or scheduling:

| | Total | BOM Complete | BOM Incomplete | Other |
|---|---|---|---|---|
| October 1975 | 74 | 56 | -- | 18 |
| November 1975 | 41 | 33 | 8 | -- |
| December 1975 | 30 | 17 | 13 | -- |
| January 1976 | 13 | 2 | 11 | -- |
| February 1976 | 16 | 2 | 14 | -- |
| March 1976 | 26 | 6 | 20 | -- |
| April 1976 | 25 | 11 | 14 | -- |
| Other | 68 | 7 | 61 | -- |
| Total | 293 | 134 | 141 | 18 |

The above work orders may, or may not, be completed in the periods shown. Reasons for rescheduling could be lack of materiel, insufficient man-hours or some other factor. Work orders that fall behind are rescheduled for a later date unless they have a high priority and must be expedited.

General steps for processing a work order requiring a BOM are as follows:

(1) AF Form 332 (Work Request) is prepared.

(2) AF Form 327 (Base Civil Engineer Work Order) is prepared.

(3) Planner/estimator provides an estimate of cost for the work to be done.

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General steps for processing a work order requiring a BOM are as follows:

(1) AF Form 332 (Work Request) is prepared.

(2) AF Form 327 (Base Civil Engineer Work Order) is prepared.

(3) Planner/estimator provides an estimate of cost for the work to be done.

(4) Job goes before the Facilities Board. (Base Commander chairs the meeting.)

(5) Job, if approved, is returned to planner for detailed planning and preparation of AF Form 1445 (Materials and Equipment List).

(6) Job is tentatively placed on the schedule for completion six months later as final plans are not yet complete.

(7) Five months prior to tentative scheduled completion, the job is considered for funding.

(8) Four months prior to tentative scheduled completion, the job must be planned, funded and materiel are to be ordered.

(9) Materiel are ordered three months prior to scheduled completion.

(10) At two months, materiel are to be 100% by end of next month.

(11) In final month, 100% of materiel must be available by end of month.

(12) In the current month, work should be completed or well underway. The progress of a work order can depend to a large degree on the decisions made in the weekly work scheduling meeting. Man-hours and materiels are resources that cannot always be easily managed and on occasion short falls of either can lead to rescheduling or work stoppage.

## C. BASE SUPPLY

### 1. Supply Support

a. General. The Dover Air Force Base BCE obtains all materiel requirements to support the RPMA operations from various base supply outlets. The AF Form 1445 (Materials and Equipment List) is used by the BCE Materiel Control Activity for all materiel requests; except for base supply service store items, individual and Equipment Authorization Inventory Data (EAID) items, and bench stock replenishment actions. This is the principal document used to support BCE approved work orders, job orders, unit service calls, and the recurring BCE RPMA maintenance requirements. Since no COCESS agency exists at Dover Air Force Base,

Base Supply is the primary source for work order materiel to support BCE RPMA operation. Figure XII-4 depicts the general flow of BCE customer requirements, through the base supply system to the ultimate source of supply.

b. Source of Materiel. Materiel to support the BCE operations are obtained from several local sources. The most prominent sources are those items located in the Prepositioned Bench Stocks, Bill of Material, Special Levels, Bulk issue procedures, Residual Materiel, BCE Supply Point, the Defense Disposal Facility and Base Supply.

(1) Bench Stock Materiel. Bench stocks consist of a 30-day stock of low cost expendable type items which are physically located within and controlled by the BCE. Resupply for items below 50% of authorized level is automatically accomplished by Base Supply personnel every 30 days based on a physical inventory. In addition, on a weekly basis, all empty bins are resupplied to insure that maximum stock is available. Current fill-rate for BCE bench stock is about 90%. Upon issue of bench stock items from Base Supply, the stock funds are reimbursed by the appropriate BCE cost center shop. Breakout of centralized area BCE bench stocks is as follows:

| Shop | Line Items | Value |
|---|---|---|
| Structural | 89 | $ 1,118 |
| Electrical, exterior | 18 | 470 |
| Electrical, interior | 87 | 1,089 |
| Heating systems | 75 | 890 |
| Entomology | 6 | 137 |
| Liquid fuels | 19 | 1,884 |
| (SMART) shop | 72 | 599 |
| Masonry | 7 | 139 |
| Protective coating | 86 | 1,751 |
| Plumbing | 126 | 1,969 |
| Electrical power | 8 | 420 |
| Refrigeration and A/C | 86 | 929 |
| Metal | 23 | 115 |
| Fire protection | 20 | 1,299 |
| Family housing maintenance | 179 | 6,565 |
| Total | 901 | $19,374 |

BCE bench stock sales for Fiscal Year 1975 totaled approximately $82,000.

# CIVIL ENGINEER WORK ORDER REQUIREMENTS

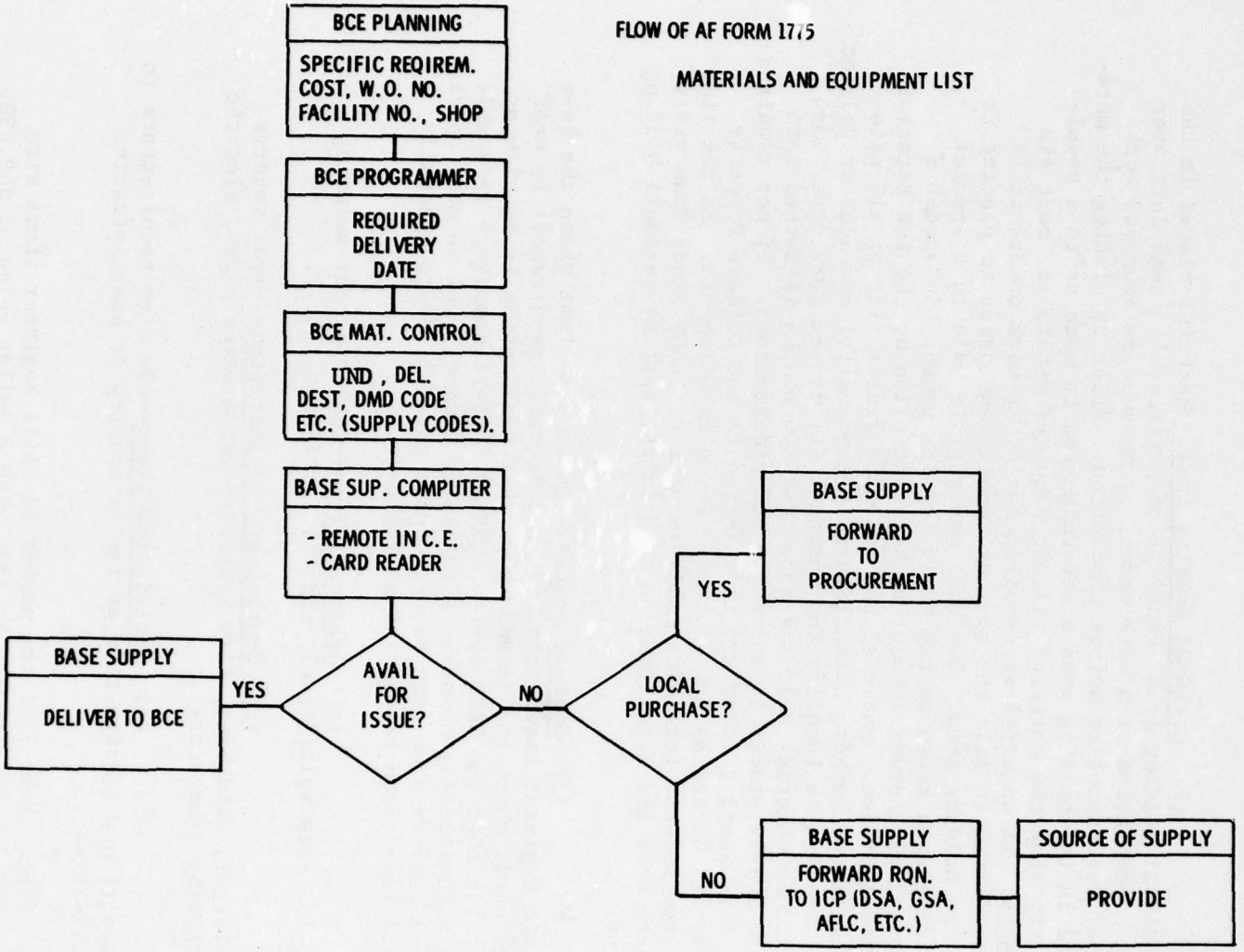



Figure XII-4

(2) Residual Holding Area. Materiel placed in the "Residual Holding Area" consists of serviceable items left over after completion of a work order, or because an approved work order was cancelled before completion. Prior to placing the materiel in the holding area a determination is made as to a possibility that the materiel will be required within the next six months. If materiel is required for other work orders it is transferred to fill the current requirement prior to placing it in the Holding Area. Residual materiel is held in a special holding area known as the "Hold for six months bin" under a special work order account number controlled by the BCE Materiel Control Office. Materiel Control maintains a list of all materiel (stock number, nomenclature, and quantity) and adds or deletes to the list to identify the materiel for future work order use. Residual materiel held for more than six months is turned into Base Supply stocks as excess to BCE requirements. If not required by Base Supply, items are transferred to the Defense Property Disposal Office as excess to Air Force requirements. At the time of the Defense Logistics Analysis Office (DLAO) Study Team visit, there were 368 line items on hand in the special residual holding area.

(3) Special Levels. These are items which the Base Civil Engineer has designated as a specific requirement to meet his needs where the demand shows that consumption is so slow or erratic that the SBSS system (UNIVAC 1050-II computer) is unable to automatically maintain a realistic demand level to meet special requirements when they occur. These special levels generally fall into three categories as follows:

(a) Seasonal Items--(chlorine for swimming pools, snow salt/gravel, special fertilizer, etc.).

(b) Contingency Support Items--(war reserve materiel, sand bags, fire hydrants, large water pipes, electric stand-by generators).

(c) Anticipated Items--new item requirements to support new construction as family housing or administrative buildings.

For Fiscal Year 1975 the number of Civil Engineer items with special levels amounted to 133, with a dollar value of $49,630.

(4) Bulk Materiel. This materiel is prepositioned in the BCE service area, and is issued to the Materiel Control

Office in large quantities to preclude the necessity of submitting numerous issue requests to Base Supply for small quantities. Bulk materiel is expended to a single BCE work order with the stock fund reimbursed by BCE Operations and Maintenance (O&M) funds upon issue, and consists of such items as gravel, asphalt, crushed rock, coal, sand, etc. Quantity and dollar value of bulk issue was not available during Study Team visit.

(5) Defense Property Disposal Office (DPDO). Periodically, items located in the DPDO area are screened by BCE personnel for possible use on approved work orders. However, when items are identified, Base Supply personnel make the withdrawal from DPDO and issue the materiel to the BCE as a regular issue from Base Supply stocks. It was stated that very few items (less than one percent) have been withdrawn from the DPDO during Fiscal Year 1975 for BCE use during Fiscal Year 1975.

(6) BCE Supply Point. Within the BCE complex, a special supply point has been established to support the BCE operations. Items stocked in the supply point consist primarily of those items for which the BCE is the primary user. Materiel is stored so that BCE technicians are able to identify and select items needed for immediate work order requirements, and if necessary, are able to identify and select substitute items whenever the principal item is not available. Items stored in the supply point are considered as base supply stock fund materiel and are expended to the appropriate BCE work order, with O&M fund reimbursing the stock fund account when issues are made. As of 30 June 1975, the following CE peculiar items were stocked in the BCE supply point:

CE Peculiar Items

| Source | Items | Demand Levels | Value |
|---|---|---|---|
| GSA | 52 | 46 | $ 4,589 |
| Local Purchase | 206 | 166 | 24,304 |
| FSS | 3 | 2 | 389 |
| DCSC | 163 | 135 | 5,597 |
| DESC | 17 | 14 | 547 |
| DGSC | 62 | 51 | 8,637 |
| DISC | 61 | 53 | 5,135 |
| Total | 564 | 467 | $49,198 |

(7) Bill of Materials. The primary document utilized by the BCE to establish or support all materiel requirements for approved work orders is an AF Form 1445 (Material and Equipment List). At Dover Air Force Base, it is the document used by the BCE Materiel Control Center to provide necessary supply data to the Base Supply computer. The information provided in the AF Form 1445 is transmitted to Base Supply via the remote BCE teletypewriter, or used for the preparation of an Issue/Turn-In Request (AF Form 2005), or a Non-FSN Requisition Manual (DD Form 1348-6). In addition to being used as a requisitioning tool for supply purposes, the AF Form 1445 also provides the BCE with the consolidated list of materiel requirements necessary to accomplish each approved work order project. Current procedure is that the Materiel Control Center and the BCE Bill of Material "Holding Area" will each retain a copy of AF Form 1445. As materiel is received from Base Supply, the Materiel Control Center will annotate their copy showing receipt, and the holding area personnel will annotate their copy showing the bin storage location. When all materiel has been received (work order, service calls, job order, etc.), the appropriate work centers are notified that all materiel is available and that the work order can be released for scheduling by the BCE Programming Office. Upon issue from Base Supply, stock becomes BCE assets and base stock fund is reimbursed by appropriate O&M funds accordingly.

c. BOM Status As of 14 September 1975, the due-out status listing for BCE work order reflected the following:

BCE WORK ORDERS (14 September 1975)

| Due Outs | Line Items | Units | Dollar Value |
|---|---|---|---|
| Number Due In: | 91 | 2,845 | $ 36,423 |
| Unsatisfactory status | 386 | 11,498 | 50,146 |
| Satisfactory status | 528 | 23,373 | 95,007 |
| Total | 1,005 | 37,716 | $181,576 |

d. BCE Expenditures. Following BCE expenditures were recorded for Fiscal Year 1975. Expenditures do not include EAID equipment or fuels.

BCE EXPENDITURES

| Agency | General Support Supplies | General Support Equipment | System Support Supplies (ALC Controlled) | Clothing | Total |
|---|---|---|---|---|---|
| Base without supplies and equipment | $550,147 | $98,459 | $2,006 | $1,154 | $651,766 |
| BCE Bench Stock | 81,885 | | 316 | | 82,201 |
| Dorm Improvement | 35,378 | | | | 35,378 |
| Hospital Supplies | 7,923 | | | | 7,923 |
| BCE Airlift Service Industrial Funding | 43,700 | | 18 | | 43,718 |
| Family Housing without supplies | 153,271 | | | | 153,271 |
| Total | $872,304 | $98,459 | $2,340 | $1,154 | $974,257 |

2. Central Supply Sources

a. Authorized Stock Levels. Stockage policies which provide for the retention of stock at the base supply level can be generally categorized as those items required for initial support of new equipment, or replacement items required to support equipment already in use. Most items required for the BCE RPMA Program at base level include materiel/items which cannot be economically required by a field or depot maintenance activity. The term Economic Order Quantity (EOQ) items is applied to these items and includes minor parts, repair components, tools, etc., in which accountability is terminated upon issue. Within the SBSS system, there are standard procedures provided to establish base supply stock levels for these items.

(1) Initial Items. In most cases, the Initial Spares Stock Levels (ISSL) to support new items of equipment has been predetermined/established by technical experts at the wholesale

level during provisioning process. The only effort required for the base supply activity is to requisition the predetermined levels authorized for base stockage, and issue as required. As a general rule, a 90-day stock level for low cost expendable items has been authorized to support the new or additional equipment being introduced on the installation. As initial items are used or consumed by the using activity, the base supply level(s) are automatically adjusted through application of an Air Force directed computer stock leveling program to insure that local stocks are resupplied according to the procedures established under the SBSS system outlined in AFM 67-1.

(2) Replenishment or Demand Levels. Levels to support replenishment stocks are based primarily on demand frequency. Base supply levels are computed on a variable stockage scale, and are dependent upon the number of past demands from users for specific items. For expendable items under the SBSS, a demand or requisitioning level is considered to be the operating level which includes the EOQ ordering policy established in AFM 67-1. Stock levels for EOQ items are based upon an economic policy that balances cost to order with cost to hold.

b. Stock Replenishment. Within the SBSS concept, the Air Force philosophy is that each SBSS activity originates and submits supply requisitions direct to a designated wholesale Inventory Control Point. Requisitions for expendable items are not reviewed or screened by any other Air Force activity prior to submission. The UNIVAC 1050-II is programmed to automatically generate MILSTRIP requisitions and associated related supply actions to ICPs, GSA, or local purchase agency. For Dover Air Force Base, an analysis of Order and Ship Time (OST) days and the General Support Division Position/Sales for Fiscal Year 1975 resulted in the following data:

ORDER AND SHIP TIME DAYS (as of October 1975)

| Priority Group | DSA | GSA | AFLC | Local Purchase |
|---|---|---|---|---|
| I (1-3) | 9 (8) | 10 (-) | 9 (9) | 13 (5) |
| II (4-8) | 14 (13) | 17 (15) | 13 (12) | 16 (11) |
| III (9-15) | 24 (22) | 30 (24) | 25 (23) | 38 (38) |

( ) denotes Standard OST days.

GENERAL SUPPORT DIVISION (GSD) STOCKAGE POSITION/SALES
(as of 30 June 1975)

| Source of Supply | On-Hand Inventory | Gross Sales | On Order |
|---|---|---|---|
| Army | $ 56,519 | $ 11,397 | $ 12,486 |
| Commercial Sources | 174,889 | 1,663,331 | 278,175 |
| DSA | 568,451 | 2,173,127 | 399,708 |
| GSA | 219,947 | 625,255 | 310,671 |
| Fuels | 19,717 | 2,094,759 | --- |
| Navy--Marines | 5,782 | 22,983 | 7,806 |
| Total GSD | $1,045,305 | $6,590,852 | $1,008,846 |

c. Issues to BCE. It is extremely difficult to extract data from the SBSS management reporting system for overall support effort being directed to the BCE effort. The base activity was able to relate the management effort to those items coded peculiar to the BCE operation (Issue Exception Code "G"). In this regard, a percentage breakout by sources of supply for Issue Exception Code "G" items is shown. (Although a percentage breakdown by Source of Supply for "all other" CE support was not available, it was felt that the percentages are fairly representative of support obtained from all sources.)

CE PECULIAR ITEMS (G ITEMS)
(564 items)

| SOURCE | % BY SOURCE |
|---|---|
| GSA | 9% |
| Local Purchase (LP) | 36% |
| Local Purchase (Federal Supply Source) | 1% |
| Defense Construction (S9C) | 30% |
| Defense Electronics (S9E) | 4% |
| Defense General (S9G) | 10% |
| Defense Industrial (S91) | 10% |
| Total | 100% |

Overall, an examination of total sales, excluding fuels indicates that about 21% of all supply sales are directed to the support of the Base Civil Engineer:

d. Funding of BCE Materiel. The general practice is that as SBSS obtains the items from DSA, GSA, other Services or local purchase, the base general stock funds buy the materiel and retain the items until it is issued (sold) to the user. Upon issue, the BCE O&M fund reimburses the stock fund account. The primary stock fund manager of the base is the Chief of Supply. He manages the stock fund operating program and oversees that approved variances in the inventory objectives furnished by his command manager are not exceeded.

e. Excess Items

BCE excess items are generated primarily from changes in equipment base mission, the organizational transfers or closures, new or better products, or completion of programmed work orders.

(a) SBSS Excess. Under the SBSS Base Supply program, the processing of General Support Division excess items against the Accountable Base Supply Item Records is an automatic process (AFM 67-1). The program generally falls into two broad categories: "Partial" and "Total" excesses. Partial excess assets are those items where the quantity exceeds the retention level(s) or the total quantity on-hand if the Requisitioning Objective (RO) is equal to zero and the date of last demand is less than 366 days. Total excess assets are considered as inactive items and are defined as those items with a zero RO and a date of last demand greater than 365 days, and with no special levels assigned. Due-in cancellations, which exceed the authorized levels are automatically produced whenever a new requirement computation is generated.

(b) Bench Stock Excesses. Computer programs of the SBSS perform level adjustments and recommend range of additions or deletions. If no usage is recorded for 90 days, a list of these items is provided to the BCE for review and decision to retain for another 90-day period. If, after 180 days no recorded issue is made, the bench stock items are automatically deleted from bench stock and items returned to base supply. If requirement exists for these items elsewhere on base and a base level is maintained, full credit from the stock fund will be allowed for that quantity which does not exceed the SBSS RO.

(c) Residual Excess. All BCE materiel held in the materiel control area "Hold for 6 Months Bin" which had not been used for approved work orders or determined as not having a foreseeable requirement will be turned in to base supply. Generally

these items are then in turn sent to the disposal activity as excess materiel to base requirements with no credit from the stock fund provided for turn in of excess materiel. Unserviceable excess property is turned in to the disposal activity by the BCE without processing through the base supply account.

D. BASE PROCUREMENT

1. Local Purchase Technique

Local purchase effected under Customer Integrated Automated Procurement System (CIAPS) is "integrated" in a similar fashion for all customers, including the CE. The System uses the Burroughs 350 computer. A few characteristics of the System follow.

(1) Input. There are two basic inputs to the system: (a) an item description which is loaded into the System for repetitively procured items and (b) a Demand Card to generate procurement action.

(2) Output. There are three basic outputs from the system: (a) Delivery orders for items under GSA contracts or other Indefinite Delivery Type Contracts (IDTCs); (b) Requests for Solicitations; and (c) item procurement descriptions for loaded items.

(3) Processes

(a) Procurement action is initiated by the impact of a Demand Card, identifying the items and the quantity required. If the item requested is not computer loaded an AF Form 9 containing the item description must be typed and accompany the Demand Card.

(b) The input is computer matched against the "Item File" which contains:

--An item identification number;
--A brief item description;
--Known vendor(s), usually two;
--Unit Price (for contract items);
--Contract Number (for GSA contracts or other open contracts); and
--Estimated delivery date (generally 45 days).

(c) Outputs are in one of four categories:

--"Delivery Order (DO) (not flagged)"
--"Delivery Order (DO) (flagged)
--"Solicitation (DD-1155) under $100 or priority 1-8."
--"Solicitation (DD-1155) over $100 and priority 9 or above."

(d) Processing Times

1 DOs (not flagged) are received by a procurement clerk the morning after a Demand Card is input to CIAPs. The DO has a price when received and is ready for signature. Usually it is marked the same day.

2 DOs (flagged) are received by a procurement clerk the morning after a Demand Card is input to CIAPS. The DO is reviewed and a price determined. The DO may then be signed and mailed or recycled through the Burroughs 350 for preparation of a revised DO. The total task is generally completed within three days.

3 "Solicitations" under $100 or Priority 1 to 8 are usually processed in two days after receipt. During the first day the procurement clerk:

--Reviews the output;
--Places calls and orders by phone;
--Annotates the abstract, DD-1155, and description;
--Prepares a modified Demand Card, as necessary; and
--Forwards all documents to the computer area.

During the second day, the actual Purchase Order (DD-1155) is received, reviewed, signed and mailed.

4 "Solicitations" over $100 and Priority 9 and above are processed, generally, in a twelve day period. During the first day or two the abstract, DD-1155s, and description are reviewed and the "solicitation" with description is mailed to potential vendors. The next eight or nine days are allowed to receive and review replies. On the eleventh day the abstracts are completed, Demand Cards are revised, as necessary, and data is forwarded to the computer area. On about the twelfth day the actual Purchase Order (PO) is received, reviewed, signed, and mailed.

5 Estimated Delivery Dates (EDDs) are placed on the POs/DOs. These are most frequently 45 days from the order date. When the EDD is reached, orders are considered completed as actual delivery dates are not in input to the CIAPS.

2. Types of Materiel Procurement Actions for BCE Support

All, or nearly all, local purchase support for the CE at Dover Air Force Base is effected through DOs/POs; Imprest Funds and BPA methods are not used. Specific statistics for CE procurement were not maintained; however, individual local contracts (POs), and DOs from GSA contracts were observed. In addition, four IDTCs for CE were observed; these were

| Vendor | Type of Items |
|---|---|
| Warren Brothers Company, Dover | Asphalt |
| George Washold Incorporated, Frederica | Crushed Stone |
| Hajoca Corporation, Lewes | Plumbing, Heating, and Air Conditioning |
| Westinghouse Electric Supply Company, Wilmington | Electrical |

All, or virtually all, CE local suppliers are within 50 miles of Dover Air Force Base.

The Hajoca requirements contract was estimated at $42,700 net or about $32,900 with discounts; discounts varied from 10 to 30%; discount examples are:

Steel Rods--10%
Heating Elements--15%
Air Conditioning Equipment--18%
Plumbing Fixtures--25%
Packing and gaskets--30%

The Westinghouse Electric Supply Company (Wilmington) requirements contract was estimated at $26,500 net or about $23,618* with discounts. (*Dover Electric Supply's bid for this item range was $23,626). Discounts ranged from 0 to 15%; discount examples are:

Circuit breakers and connectors--net
Lugs, terminals, and coils--15%

3. Delivery Times

The Dover Air Force Base order and shipping time (OST) report showed that OST for local purchase transactions were: (average days)

| Month | IPG I | IPG II | IPG III |
|---|---|---|---|
| July | 5 | 11 | 39 |
| August | 9 | 6 | 39 |
| September | 5 | N/A | 39 |

CE personnel estimated the average order to delivery time at 40 to 45 days.

Review of POs/DOs showed estimated delivery dates of 45 days from order date to be prevalent.

A review of 28 deliveries (actual) showed the following:

| | |
|---|---|
| 10 days or less | = 1 |
| 11-30 days | = 2 |
| 31-60 days | = 7 |
| over 60 days | = 18 |
| Total | 28 |

4. Preparation for COCESS

In preparation for establishment of a COCESS, Dover Air Force Base management engineering personnel made a study of costs associated with the provision of approximately $112 thousand in materiel support to the BCE using the existing Air Force Supply System vice use of a COCESS. The Air Force annual administrative and operational costs were calculated to be as follows:

| | |
|---|---|
| Air Force Supply System | $76,550 |
| COCESS | 20,330* |

*Included $3,000 for COCESS space

The major difference in operating and administrative costs were computed for the "Procurement" function where annual costs under the on-going system were estimated at $46,828 and costs under COCESS arrangement were estimated at $6,812. Seventy-one percent of the estimated operating cost savings were associated with the procurement area.

## E. INDIVIDUAL ITEM RESEARCH

Ten long standing work orders selected at random were screened for materiel shortages. The findings were as follows:

a. This work order was delayed due to requirements for flanges for a Bell and Gossett pump. Flanges were ordered through local purchase on 26 September 1975, with a BCE required date of 27 October 1975. Estimated delivery date of the item was 20 October 1975; however, work order was rescheduled for a later date.

b. This work order was delayed due to a requirement for 8-foot corner posts. The posts were requisitioned by installation supply on 25 November 1974, with a BCE required date of 20 May 1975. Follow-up action indicated that the requisition had an estimated delivery date of 31 October 1975 but had not been received by that date. A second follow-up was initiated. Work order was scheduled for April 1976.

c. This work order was delayed due to a requirement for rubberized cloth weather stripping. The stripping was originally ordered 9 April 1974 with a BCE required date of 14 April 1974. Requirement was cancelled and reordered on two subsequent occasions. Latest order date 14 November 1974 with estimated delivery date of 20 October 1975. Item had been received as of 28 October 1975 and work order has been scheduled for completion during November 1975.

d. This work order was delayed due to a requirement for bleached cheesecloth, 36 inches wide. The cheesecloth was requisitioned from GSA on 4 August 1975, with a required date by BCE of 3 September 1975. Follow-up action indicated estimated delivery date 5 November 1975. The work order was rescheduled for completion in March 1976.

e. This work order was delayed due to a requirement for expansion bolt anchors. The anchors were ordered on 12 December 1974 with a required date by the BCE of 30 April 1975. The anchors were received on 28 October 1975 and the work order was rescheduled for completion during January 1976.

f. This work order was delayed due to a requirement for two items: 2-inch galvanized rigid conduct and 1/4-inch steel plate. Actual requisition dates could not be determined. The items were required by BCE to meet a September 1975 starting date.

Follow-up action indicated that items were shipped from Defense General Supply Center on 14 October 1975. Work order was rescheduled for completion February 1976.

g. This work order was delayed due to a requirement for top rails for a steel mesh cage. Rails were ordered from local purchase on 28 November 1974 with required date by BCE of 28 December 1974. Rails were due in 31 October 1975 and work order scheduled for completion during April 1976.

h. This work order was delayed due to a requirement for one exterior door. The door was initially required 9 April 1974 but not ordered until 9 May 1974. Subsequently the requirement was placed on local purchase 17 June 1975 with estimated delivery date of 10 October 1975. Second follow-up action was initiated and the work order was rescheduled to start during April 1976.

i. This work order was delayed due to a requirement for fire alarm wire. The wire was requisitioned on 17 September 1974 and required by BCE on 17 October 1974. The wire was subsequently reordered on 17 October 1975. The requisition status was unknown as of 28 October 1975. The work order was originally planned for completion in October 1975 and will be rescheduled when materiels are received.

j. This work order was delayed due to a requirement for five gallons of creosote. The creosote was ordered on 20 June 1974 with a required date by BCE of 1 August 1975. Follow-up action indicated creosote was never ordered by supply. The order was made on 20 October 1975. Work order will be rescheduled when creosote is available.

## CHAPTER XIII

## OFFUTT AIR FORCE BASE

### A. CIVIL ENGINEER SUPPORT

The Government Operated Civil Engineer Supply Store (GOCESS) at Offutt Air Force Base has been in operation since 1971. It was established on a test basis after attempts failed to establish a Contractor Operated Civil Engineer Supply Store (COCESS). As with the COCESS, local purchase of supplies are made outside the stock fund under authority granted to the Strategic Air Command (SAC) to operate full-waivered COCESS operations.

The GOCESS, as the name implies, is operated by Government (Air Force) personnel. Two procurement buyers, a Staff Sergeant (E-5) and a Sergeant (E-4), are assigned to the GOCESS to make purchases under Blanket Purchase Agreements (BPAs) and Purchase Orders (POs). Moreover, three Civil Engineer Materiel Control personnel are assigned for warehousing and administration of supplies purchased. The Civil Engineer personnel include one Sergeant (E-4) and two WG-4 personnel.

### B. OPERATING PROCEDURES

There is no line item accounting of locally purchased items in the GOCESS, but a dollar value of inventory is maintained on the B-3500 computer. This is done by maintaining a running dollar difference between receipts into, and issues from, the GOCESS. A daily visual check is made of the bins to determine which items should be replenished. If replenishment is required, an Air Force Form 16, Traveling Purchase Request, which is established for each item in the bench stock, is forwarded to the buyer. The buyer determines which vendor is to provide the item, and arranges for delivery of the item. The vendor's sales slip serves as the receiving document and as the invoice for bill paying purposes.

Bill paying, a function of the Accounting and Finance Division of the Comptroller Office, is performed by an Airman First Class (E-3). This individual estimated he spent approximately 75% of his time paying bills for materials bought by the GOCESS.

Quarterly, the Comptroller Office furnishes an Air Force Form 405, Obligation Authority (OA) to the GOCESS in the amount of $300,000. The OA contains the Civil Engineer Operations & Maintenance (O&M) funds which are used by the procurement buyers to make purchases for the GOCESS. Status of expenditures under the OA are maintained by the Civil Engineer Funds Manager.

C. PROCUREMENT

The procurement buyers make BPA calls against 32 different vendors in the Omaha area with whom BPAs are established. Approximately 30 BPA calls per day are made by the buyer. BPA calls are made up to $500 without competition and over $500 with competition. The Armed Services Procurement Regulation (ASPR) authorizes these limits and provides other BPA guidance to the buyers. In addition, approximately 300 POs are processed monthly by the buyers. POs are used for local purchases away from the Omaha vicinity and where a more formal (written) procurement instrument is desired or required.

The GOCESS operates a central bench stock which consists of 1700 line items and processes requests to satisfy items required for work orders and job orders. A breakout of expenditures during Fiscal Year 1975 follows:

| Bench Stock | Work Orders | Emergency Job Orders | Urgent Routine Job Orders | Total |
|---|---|---|---|---|
| $573,700 | $327,800 | $151,800 | $145,900 | $1,199,200 |

The value of the locally purchased GOCESS bench stock inventory on hand as of 1 December 1975 was $116,488

Located in the GOCESS, but segregated from locally purchased items, is a base supply furnished bench stock valued at $1,350. Base supply provides those supplies not authorized to be procured through the GOCESS. The total amount obtained from base supply for Fiscal Year 1975 was $295,000. The total amount of Civil Engineer funds expended for supplies was:

| | | |
|---|---|---|
| $1,199,200 | GOCESS | (85.4) |
| 205,627 | Base Supply | (14.6) |
| $1,404,827 | | |

D. PERSONNEL COSTS TO OPERATE GOCESS

The personnel required to operate the GOCESS and their estimated annual salaries are as follows:

| Number | Grade | Monthly Pay | Annual Pay |
|---|---|---|---|
| 1 | SSgt (E-5) | $597.30 | $7,168 |
| 1 | SSgt (E-5) | 597.30 | 7,168 |
| 1 | Sgt (E-4) | 524.10 | 6,289 |
| 1 | WG-4 | 693.33 est | 8,320 est |
| 1 | WG-4 | 693.33 est | 8,320 est |
| | | | $37,265 |

In addition, the following Materiel Control personnel are involved with processing requests to obtain items from the GOCESS.

| Grade | Number | Annual Salary | Total |
|---|---|---|---|
| GS-06 | 1 | $10,737 | $10,737 |
| GS-04 | 2 | 8,608 | 17,216 |
| E-5 | 1 | 7,168 | 7,168 |
| E-4 | 2 | 6,289 | 12,578 |
| E-3 | 2 | 5,292 | 10,584 |
| Total | 8 | | $58,283 |

Since 85% of the expenditures are made through GOCESS, it is assumed that 85% of the personnel are involved with obtaining supplies from GOCESS. This amounts to: $58,283 x .85 = $49,541

The Comptroller's Office estimated that 75% of the time of an Airman First Class (E-3) is spent paying bills for supplies received by GOCESS. This amounts to: $459.00 x .75 = $344.25 monthly x 12 = $4,131 annually. The total personnel cost for annual operation of the GOCESS is:

| | |
|---|---|
| $37,265 | GOCESS |
| 4,131 | Comptroller |
| 49,541 | Base Civil Engineer (BCE) Materiel Control Personnel |
| $90,937 | Total Personnel Cost |

## E. PERFORMANCE EFFECTIVENESS

Table XIII-1 shows the average number of back orders at SAC bases over 30 and over 60 days old and the percent that these back orders represent of the average number received every 30 and every 60 days. For example, Offutt's monthly average of four line items on back order over 30 days is .2 of 1% of the average line items received every 30 days. Offutt's average of one back order over 60 days is .03 of 1% of the average line items received every 60 days.

Table XIII-2 shows the average number of back orders for SAC bases over 30 and over 60 days old during 1974. As shown, Offutt Air Force Base, with the GOCESS operation, had the lowest average of all SAC bases.

## Table XIII-1

### BACK ORDERS - 1974
(Average Per Month)

| Air Force Bases | Total Line Items Received 1974 | Average Line Items Received Every | | Average Line Items Backordered Over | | | | |
|---|---|---|---|---|---|---|---|---|
| | | 30 Days | 60 Days | 30 Days | % | % 1974 | 60 Days | % |
| Offutt | 23850 | 1988 | 3975 | 4 | .2 | * | 1 | .03 |
| Vandenberg | 37176 | 3098 | 6196 | 95 | 3.0 | .3 | 58 | .94 |
| Blytheville | 7626 | 636 | 1271 | 123 | 19.3 | 1.6 | 12 | .94 |
| Barksdale | 32556 | 2713 | 5426 | 147 | 5.4 | .5 | 88 | 1.6 |
| Whiteman | 24699 | 2058 | 4117 | 159 | 7.7 | .6 | 75 | 1.8 |
| Rickenbacker | 16524 | 1377 | 2754 | 165 | 12.0 | 1.0 | 77 | 2.8 |
| Davis-Monthan | 5539 | 462 | 923 | 182 | 39.4 | 3.3 | 67 | 7.3 |
| Dyess | 19210 | 1601 | 3202 | 192 | 12.0 | 1.0 | 66 | 2.0 |
| Kincheloe | 10921 | 910 | 1820 | 198 | 21.8 | 1.8 | 118 | 6.5 |
| Carswell | 15294 | 1275 | 2549 | 200 | 15.7 | 1.3 | 121 | 4.8 |
| F. E. Warren | 20316 | 1693 | 3386 | 276 | 16.3 | 1.4 | 167 | 4.9 |
| Ellsworth | 18792 | 1566 | 3132 | 297 | 19.0 | 1.6 | 154 | 4.9 |
| Beale | 12319 | 1027 | 2053 | 379 | 36.9 | 3.1 | 168 | 8.2 |
| Loring | 11244 | 937 | 1874 | 425 | 45.4 | 3.8 | 292 | 15.6 |
| Pease | 14544 | 1212 | 2424 | 455 | 37.5 | 3.1 | 380 | 15.7 |
| March | 10302 | 859 | 1717 | 458 | 53.3 | 4.4 | 330 | 19.2 |
| Grand Forks | 11802 | 984 | 1967 | 485 | 49.3 | 4.1 | 287 | 14.6 |
| Plattsburgh | 6336 | 528 | 1056 | 503 | 95.3 | 7.9 | 222 | 21.0 |
| Griffiss | 9132 | 761 | 1522 | 562 | 73.9 | 6.2 | 410 | 26.9 |
| Wurtsmith | 16926 | 1411 | 2821 | 568 | 40.3 | 3.4 | 353 | 12.5 |
| K. I. Sawyer | 7086 | 591 | 1181 | 613 | 103.7 | 8.7 | 397 | 33.6 |
| Fairchild | 19070 | 1589 | 3178 | 615 | 38.7 | 3.2 | 222 | 7.0 |
| Minot | 19070 | 1589 | 3178 | 673 | 42.4 | 3.5 | 221 | 7.0 |
| Malmstrom | 12006 | 1000 | 2001 | 735 | 73.5 | 6.1 | 385 | 19.2 |

Source: Field Research

* Less than 0.005%

Table XIII-2

BACK ORDERS - 1974
(Average Per Month)

| Air Force Bases | Over 30 Days | Over 60 Days |
|---|---|---|
| Offutt | 4 | 1 |
| Vandenberg | 95 | 58 |
| Blytheville | 123 | 12 |
| Barksdale | 147 | 88 |
| Whiteman | 159 | 75 |
| Rickenbacker | 165 | 77 |
| Davis-Monthan | 182 | 67 |
| Dyess | 192 | 66 |
| Kincheloe | 198 | 118 |
| Carswell | 200 | 121 |
| F. E. Warren | 276 | 167 |
| Ellsworth | 297 | 154 |
| Beale | 379 | 168 |
| Loring | 425 | 292 |
| Pease | 455 | 380 |
| March | 458 | 330 |
| Grand Forks | 485 | 287 |
| Plattsburgh | 503 | 222 |
| Griffiss | 562 | 410 |
| Wurtsmith | 568 | 353 |
| K. I. Sawyer | 613 | 397 |
| Fairchild | 615 | 222 |
| Minot | 673 | 221 |
| Malmstrom | 735 | 385 |

Source: Field Research

Table XIII-3 shows the average number of line items received by the SAC bases within a 60 day period in 1974, and the number and percent which were on back order between 30 and 60 days. For example, Offutt received an average of 3,975 line items every 60 days, three of which were on order more than 30 but less than 60 days. The percentage column ranks the bases, with Offutt having the lowest rate on order between 30 and 60 days of the average total received every 60 days.

Table XIII-4 shows the average number of line items on back-order at SAC bases in 1974 that were over 60 days old.

Table XIII-3

RECEIPTS

| Air Force Bases | Average Line Items Received Every 60 Days | Over 30 Less Than 60 Days | Percent |
|---|---|---|---|
| Offutt | 3,975 | 3 | 0.08 |
| March | 1,717 | 128 | 0.1 |
| Vandenberg | 6,196 | 37 | 0.6 |
| Barksdale | 5,426 | 59 | 1.1 |
| Whiteman | 4,117 | 84 | 2.0 |
| Carswell | 2,549 | 79 | 3.1 |
| Pease | 2,424 | 75 | 3.1 |
| Rickenbacker | 2,754 | 88 | 3.2 |
| F. E. Warren | 3,386 | 122 | 3.6 |
| Dyess | 3,202 | 126 | 3.9 |
| Kincheloe | 1,820 | 80 | 4.4 |
| Ellsworth | 3,132 | 143 | 4.6 |
| Loring | 1,874 | 133 | 7.1 |
| Wurtsmith | 2,821 | 215 | 7.6 |
| Blytheville | 1,271 | 111 | 8.7 |
| Griffiss | 1,522 | 152 | 10.0 |
| Grand Forks | 1,967 | 198 | 10.1 |
| Beale | 2,053 | 211 | 10.3 |
| Fairchild | 3,178 | 393 | 12.4 |
| Davis-Monthan | 923 | 115 | 12.5 |
| Minot | 3,178 | 452 | 14.2 |
| Malmstrom | 2,001 | 350 | 17.5 |
| K. I. Sawyer | 1,181 | 216 | 18.3 |
| Plattsburgh | 1,056 | 281 | 26.6 |

Source: Field Research

Table XIII-4

BACKORDERS

| Air Force Bases | Average Line Items on Backorder Over 60 Days |
|---|---|
| Offutt | 1 |
| Blytheville | 12 |
| Vandenberg | 58 |
| Dyess | 66 |
| Davis-Monthan | 67 |
| Whiteman | 75 |
| Rickenbacker | 77 |
| Barksdale | 88 |
| Kincheloe | 118 |
| Carswell | 121 |
| Ellsworth | 154 |
| F. E. Warren | 167 |
| Beale | 168 |
| Minot | 221 |
| Fairchild | 222 |
| Plattsburgh | 222 |
| Grand Forks | 287 |
| Loring | 292 |
| March | 330 |
| Wurtsmith | 353 |
| Pease | 380 |
| Malmstrom | 385 |
| K. I. Sawyer | 397 |
| Griffiss | 410 |

Source: Field Research

# CHAPTER XIV

# UNITED STATES AIR FORCE, EUROPE

## A. MANAGEMENT DATA

### 1. Theater Organization

Figure XIV-1 shows the United States Air Force, Europe (USAFE) organization, including the Deputy Chief of Staff (DCS)/ Civil Engineering and Services and the DCS/Logistics. Figure XIV-2 shows the locations at which Civil Engineering (CE) operations are performed and to which CE materiel support must be provided. CE operations and materiel support for USAFE are significantly influenced by three organizational substructures including:

--The USAFE Civil Engineer staff structure which disseminates CE policy from USAFE Headquarters, DCS/Civil Engineering and Services to the respective CE organizations located at bases throughout the Theater.

--The USAFE logistics support structure consisting of Base Supply Organizations throughout the theater which receive policy and operating guidance from USAFE Headquarters, DCS/Logistics; and,

--The USAFE procurement support structure consisting of the USAFE Procurement Center, Regional Procurement Offices, and local (base) procurement units; all of which (1) receive policy guidance from the DCS/Logistics and (2) provide some buying/ordering support to the Civil Engineer. Each of these organizational arrangements are described in the following paragraphs.

Since the primary day-to-day CE operations and materiel, support operations including procurement occur at the base level, materiel support processes and most statistics will be described and discussed in a subsequent section based on visits to three Air Bases: Ramstein, Hahn, and Rhein-Main.

### 2. Theater CE Organization

Figure XIV-3 shows the organization and Table XIV-1 reflects staffing of the DSC/Engineering and Services, USAFE. The organization is responsible for providing CE professional knowledge and



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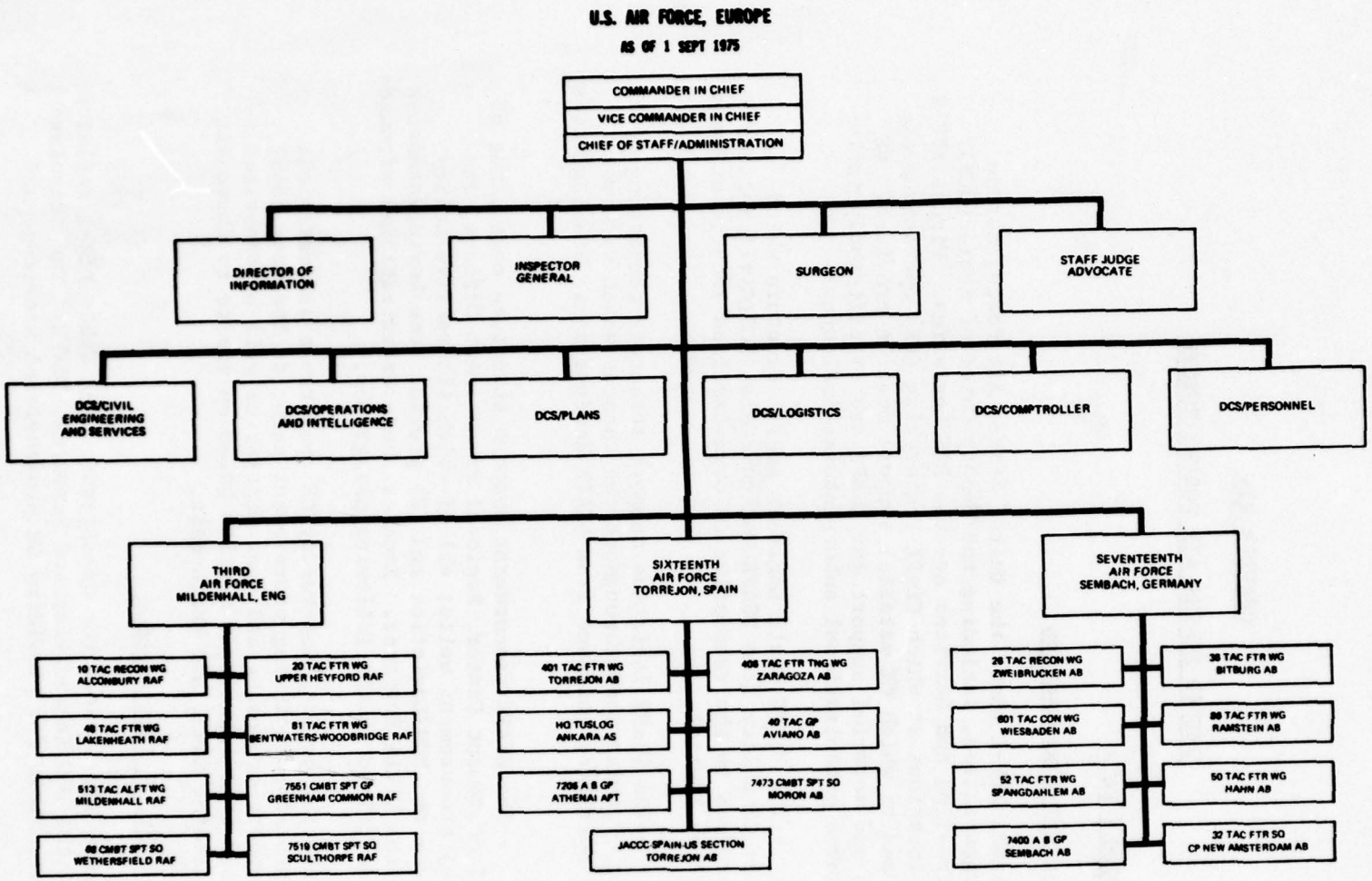

U.S. AIR FORCE, EUROPE
AS OF 1 SEPT 1975
COMMANDER IN CHIEF
VICE COMMANDER IN CHIEF
CHIEF OF STAFF/ADMINISTRATION
DIRECTOR OF INFORMATION
INSPECTOR GENERAL
SURGEON
STAFF JUDGE ADVOCATE
DCS/CIVIL ENGINEERING AND SERVICES
DCS/OPERATIONS AND INTELLIGENCE
DCS/PLANS
DCS/LOGISTICS
DCS/COMPTROLLER
DCS/PERSONNEL
THIRD AIR FORCE MILDENHALL, ENG
SIXTEENTH AIR FORCE TORREJON, SPAIN
SEVENTEENTH AIR FORCE SEMBACH, GERMANY
10 TAC RECON WG ALCONBURY RAF
20 TAC FTR WG UPPER HEYFORD RAF
48 TAC FTR WG LAKENHEATH RAF
81 TAC FTR WG BENTWATERS-WOODBRIDGE RAF
513 TAC ALFT WG MILDENHALL RAF
7551 CMBT SPT GP GREENHAM COMMON RAF
48 CMBT SPT SQ WETHERSFIELD RAF
7519 CMBT SPT SQ SCULTHORPE RAF
401 TAC FTR WG TORREJON AB
406 TAC FTR TNG WG ZARAGOZA AB
HQ TUSLOG ANKARA AS
40 TAC GP AVIANO AB
7206 A B GP ATHENAI APT
7473 CMBT SPT SQ MORON AB
JACCC SPAIN-US SECTION TORREJON AB
26 TAC RECON WG ZWEIBRUCKEN AB
36 TAC FTR WG BITBURG AB
601 TAC CON WG WIESBADEN AB
86 TAC FTR WG RAMSTEIN AB
52 TAC FTR WG SPANGDAHLEM AB
50 TAC FTR WG HAHN AB
7400 A B GP SEMBACH AB
32 TAC FTR SQ CP NEW AMSTERDAM AB

Figure XIV-1

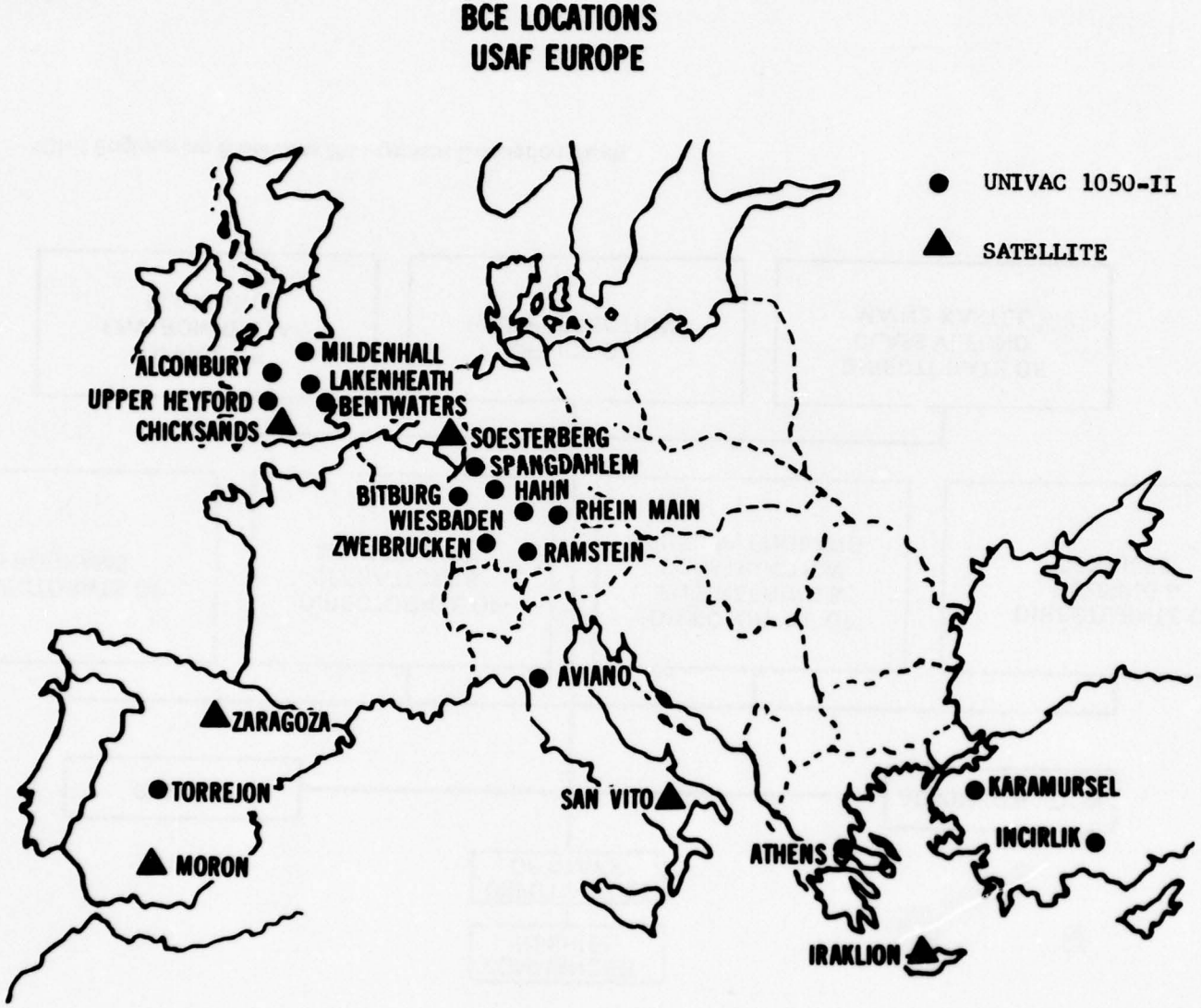
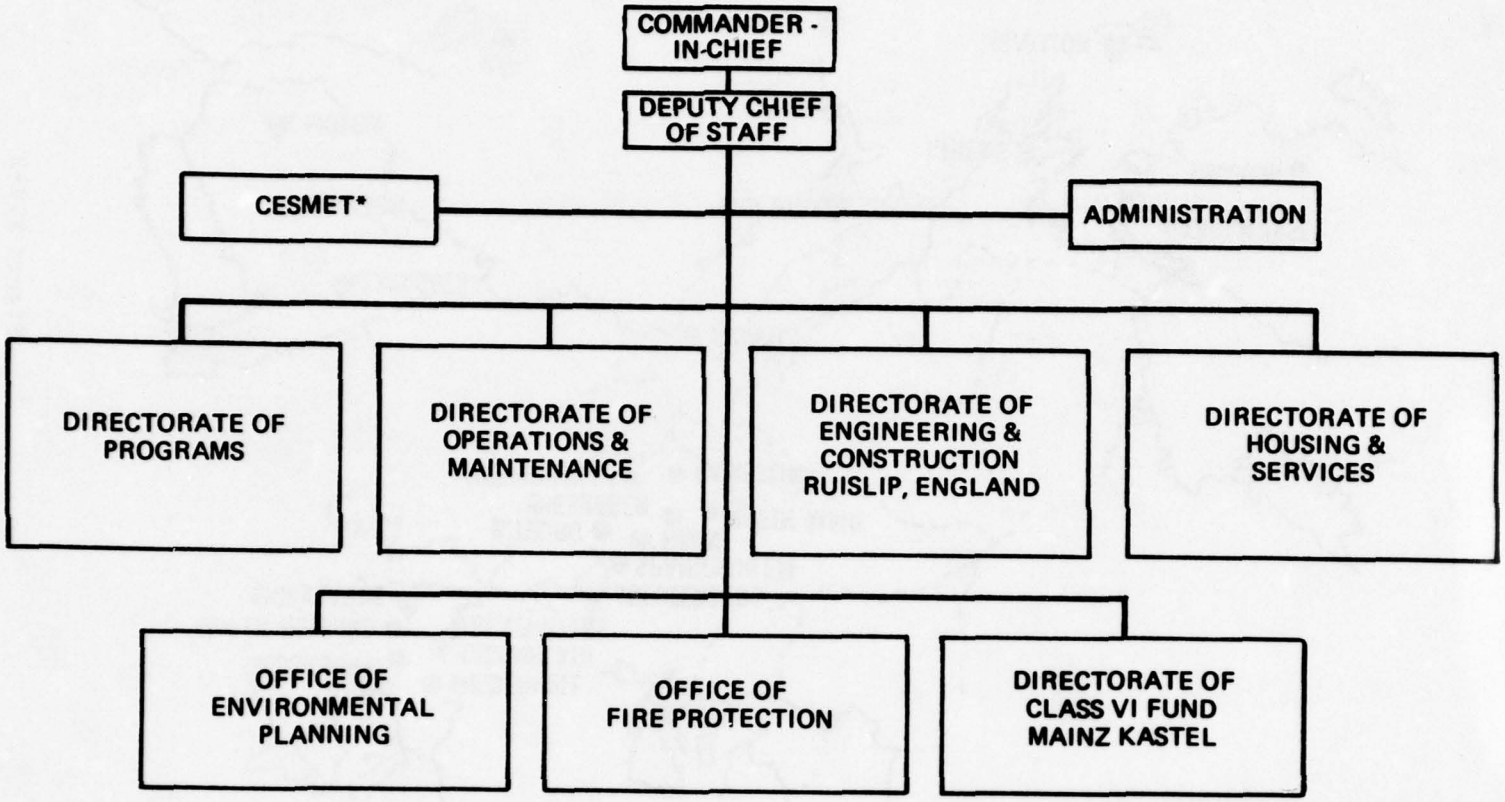

BCE LOCATIONS
USAF EUROPE
UNIVAC 1050-II
SATELLITE
ALCONBURY
MILDENHALL
LAKENHEATH
UPPER HEYFORD
BENTWATERS
CHICKSANDS
SOESTERBERG
SPANGDAHLEM
BITBURG
HAHN
WIESBADEN
RHEIN MAIN
ZWEIBRUCKEN
RAMSTEIN
AVIANO
ZARAGOZA
TORREJON
SAN VITO
KARAMURSEL
INCIRLIK
ATHENS
MORON
IRAKLION

Figure XIV-2

**DCS/ENGINEERING & SERVICES**
**US AIR FORCE, EUROPE**




*Civil Engineering & Services Management Evaluation Team.



Figure XIV-3

Table XIV-1

UNITED STATES AIR FORCE, EUROPE
DEPUTY CHIEF OF STAFF/ENGINEERING AND SERVICES STAFFING

| ORGANIZATION | AUTHORIZATION |
|---|---|
| Deputy Chief of Staff | 6 |
| *CESMET | 8 |
| Administration | 4 |
| Directorate of Programs | 39 |
| Directorate Operations and Maintenance | 25 |
| Directorate Engineering and Construction | 58 |
| Directorate Housing and Services | 25 |
| Office Environmental Planning | 8 |
| Office of Fire Protection | 5 |
| Directorate of Class VI Fund Mainz-Kastel | 31 |
| 7002 Civil Engineering Flight | 225 |
| TOTAL | 434 |

Source: Field Research
*Civil Engineering Management Services Evaluation Team

guidance to the Commander, USAFE, and CE policy technical guidance to the CE squadrons and base commanders throughout the theater. Primarily, the Directorates and Offices provide policy guidance, engineering services (e.g., construction support), and management surveillance; however, the Directorate of Operations and Maintenance also provides more direct guidance and management control to the 7002 CE Flight.

The 7002 CE Flight, consists of 225 personnel (one officer, 20 enlisted, one United States civilian, and 203 local nationals), and assists in the performance of heavy, low level, military base construction throughout the theater. The Flight has its own construction equipment and is extremely mobile.

The CE squadrons, which are located at Air Bases in the theater and receive policy and technical guidance from the DCS/ Engineering and Services, are organized essentially the same as those at bases in the Continental United States (CONUS). These local CE organizations will be discussed in more detail in conjunction with the description of specific activity operations.

3. United States Air Force, Europe, Supply Support Organization

Figure XIV-4 shows the organization and Table XIV-2 the staffing for the DCS/Logistics, USAFE. The DCS/Logistics directorates provide policy direction and technical guidance for their respective functional areas to the operating organizations throughout the theater.

HEADQUARTERS, UNITED STATES AIR FORCE, EUROPE
DEPUTY CHIEF OF STAFF/LOGISTICS ORGANIZATIONAL CHART

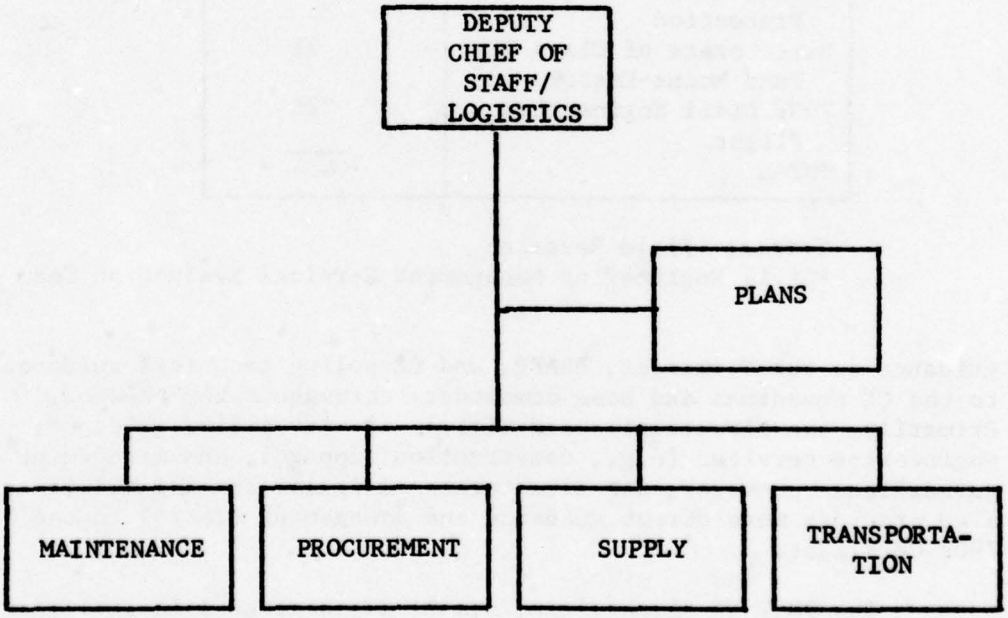



Figure XIV-4

Table XIV-2

DEPUTY CHIEF OF STAFF/LOGISTICS STAFFING

| UNITED STATES AIR FORCE, EUROPE | |
|---|---|
| ORGANIZATION | AUTHORIZATION |
| Deputy Chief of Staff | 12 |
| Plans | 44 |
| Maintenance | 141 |
| Procurement | 12 |
| Supply | 82 |
| Transportation | 31 |
| TOTAL | 322 |

Source: Field Research

The Directorate for Supply provides such policy and technical guidance to supply squadrons and base commanders in the theater. The policy and technical guidance applies to supply support in general; that is, it does not normally apply to a specific commodity area or type of support. There is no dedicated system for CE supply support. The Supply Squadrons located at Air Bases in the theater are organized essentially the same as those at bases in CONUS and will be discussed in more detail in conjunction with the description of specific activity operations.

4. United States Air Force, Europe, Procurement (Purchase) Organization. USAFE, including CE organizations, receives offshore European procurement support through a theater-wide procurement structure. Figure XIV-5 shows the overall organization for Air Force procurement in Europe, including the Headquarters USAFE (at Ramstein Air Base), the USAFE Procurement Units (at Lindsey Air Station, Wiesbaden), the six Regional Procurement Offices, and the local, base procurement offices. Central procurement is accomplished at the USAFE Procurement Center. Decentralized procurement is effected primarily by the Regional Procurement Offices. Each of the Regional Offices provides procurement support for the base activity on which it is located, plus the activities/bases in its "region" (see Figure XIV-5). Small contingents of personnel at bases/activities provide some local buying/ordering support. As of 1 October 1975, the Air Force procurement organizations in Europe were staffed as shown in Table XIV-3.

**PROCUREMENT ORGANIZATION**
**U.S. AIR FORCE, EUROPE**

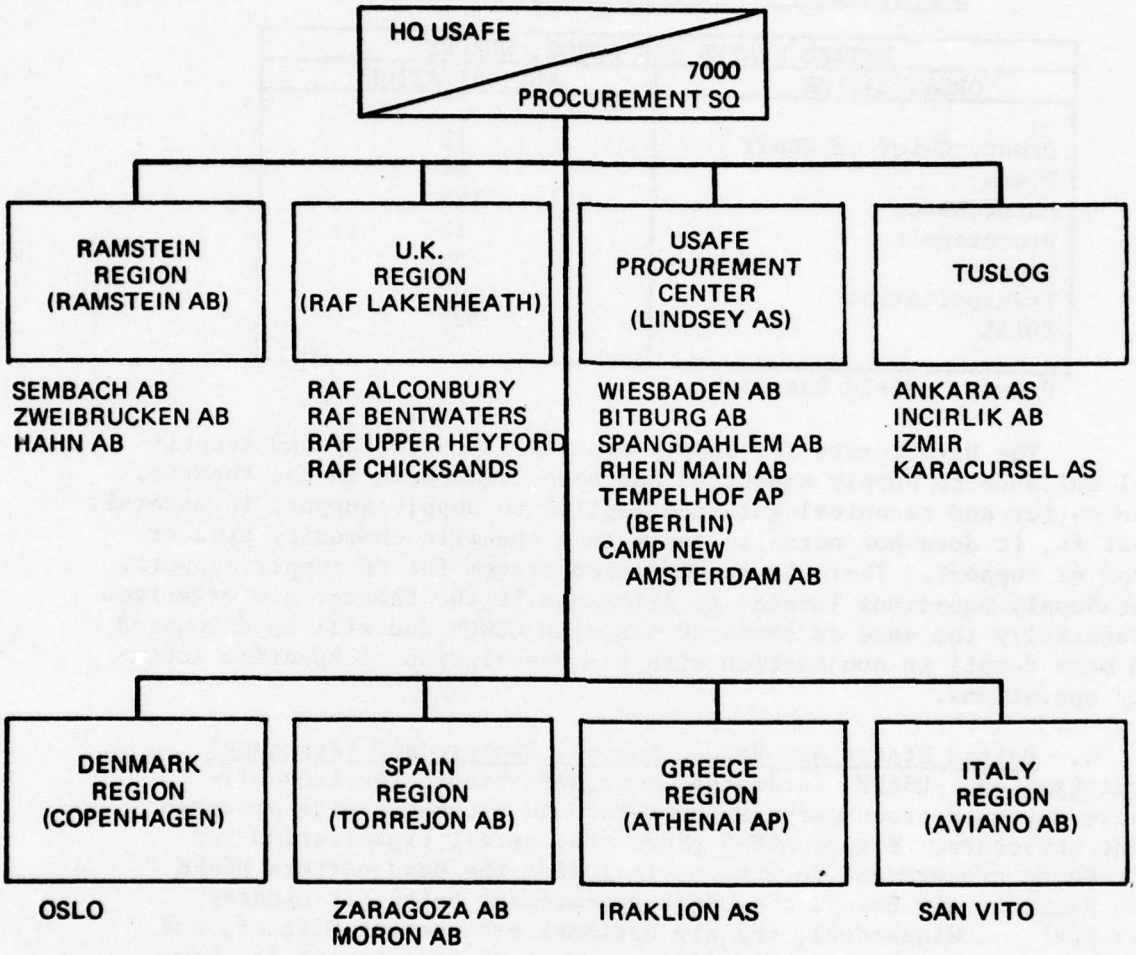



Figure XIV-5

Table XIV-3

UNITED STATES AIR FORCE, EUROPE
PROCUREMENT PERSONNEL

| ORGANIZATION | MILITARY | CIVILIAN | TOTAL |
|---|---|---|---|
| USAFE Headquarters (Ramstein AB) | 9 | 3 | 12 |
| USAFE Procurement Center (Lindsey AS) | 34 | 83 | 117 |
| Bitburg AB | 2 | 5 | 7 |
| Tempelhof Airport (Berlin) | 2 | 23 | 25 |
| Camp New Amsterdam AB | 3 | 4 | 7 |
| Ramstein AB (Region) | 15 | 38 | 53 |
| Hahn AB | 2 | 2 | 4 |
| Zweibrucken AB | 1 | 3 | 4 |
| Lakenheath RAF (UK Region) | 16 | 23 | 39 |
| Alconbury RAF | 3 | 2 | 5 |
| Bentwaters RAF | 4 | 1 | 5 |
| Upper Heyford RAF | 4 | 4 | 8 |
| Chicksands RAF* | 2 | 1 | 3 |
| Torrejon AB (Spain Region) | 16 | 15 | 31 |
| Zaragoza AB | 6 | 4 | 10 |
| Moron AB | 0 | 3 | 3 |
| Copenhagen (Denmark Region) | 1 | 7 | 8 |
| Oslo | 0 | 3 | 3 |
| Athenai Airport (Greece Region) | 10 | 9 | 19 |
| Iraklion AS | 8 | 4 | 12 |
| Aviano AB (Italy Region) | 3 | 11 | 14 |
| San Vito* | 5 | 10 | 15 |
| Ankara AS (TUSLOG HQ) | 11 | 8 | 19 |
| Incirlik AB | 7 | 4 | 11 |
| Izmir | 1 | 3 | 4 |
| Karamursel AS* | 8 | 5 | 13 |
| Total | 173 | 278 | 451# |

Source: USAFE Headquarters

# Six personnel (1 military, 1 DAF civilian, and 4 local nationals) at Rhein-Main AB excluded, because Rhein-Main is part of a separate command.

* Security Service.

a. The United States Air Force, Europe, Procurement Center.

The USAFE Procurement Center is organized as shown in Figure XIV-6. Its responsibilities are to provide centralized

**USAFE PROCUREMENT CENTER**
**OL "A" 7000TH PROCUREMENT SQUADRON**

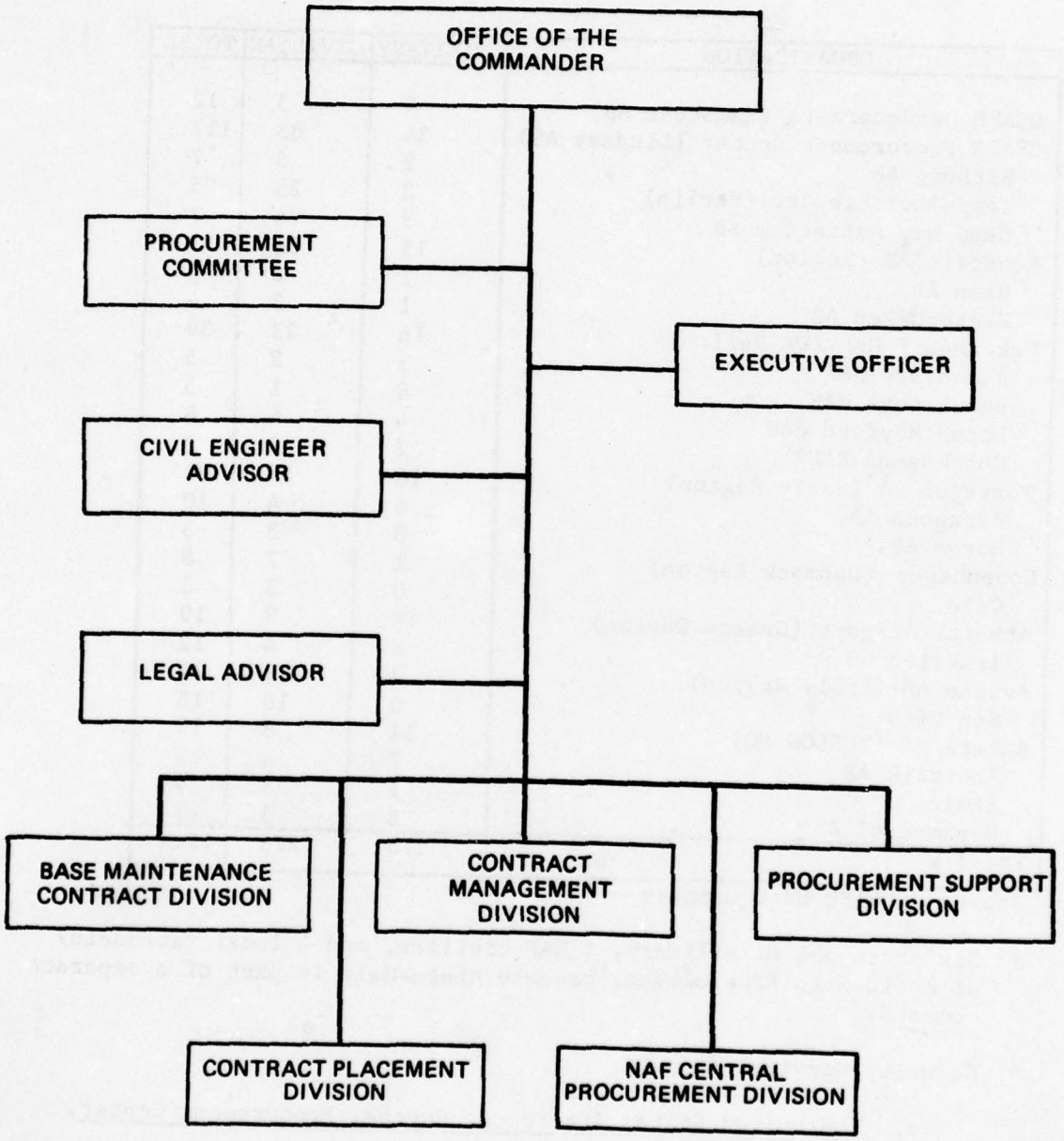





Figure XIV-6

procurement, mechanization, and administration capability to Air Force activities throughout Europe. While these responsibilities extended to all materiel and services, a significant portion (estimated at approximately 75%) is associated with functions and tasks of the CE, including construction contracts, base maintenance contracts, and utilities contracts and services, plus their administration. The extent of such involvement is indicated by the position of "Civil Engineer Advisor" and the existence of a Base Maintenance Contract Division and an Installations Support Branch.

Of 3,686 supply (materiel) line items purchased during October 1975, it was estimated that 70 to 80 percent were for CE support. Most of these purchases were for the Base Civil Engineer operations at Wiesbaden Air Base, Bitburg Air Base, Spangdahlem Air Base, and Rhein-Main Air Base and, especially Rhein-Main Air Base, because of its size. These activities are served on a regional basis by the USAFE Procurement Center.

b. The Regional Procurement Office, Ramstein Air Base

The Regional Procurement Office, located at Ramstein Air Base is organized as shown in Figure XIV-7 and is staffed as shown on the Table XIV-3. As of November 1975, the staff was being increased by four. The Office has responsibility for providing procurement support to USAFE Headquarters, Ramstein Air Base, Sembach Air Base, Hahn Air Base, and Zweibrucken Air Base.

With the establishment of the Regional Procurement Concept, base procurement offices were virtually eliminated. Zweibrucken and Hahn Air Bases in the Ramstein Region each has four procurement personnel. These local base procurement personnel are responsible for three tasks: (1) emergency local procurement actions (for materiel or services); (2) contract maintenance of local base equipment (e.g., typewriters); and (3) contract administration for immediate area contracts let by other procurement offices.

During Fiscal Year 1975 the Regional Procurement Offices accomplished 10,200 actions for 37,200 line items valued at $16.3 million. It was estimated that 75% of the workload was associated with CE type support. Again, the estimates include such things as minor construction, utilities and petroleum, oil, and lubricants. Materiel support for CE operations represents about one-third of the estimated CE type support for 25% of the total workload.

A review of the procurement techniques used by the Regional Procurement Office shows that all actions are by contract, purchase order, or delivery order. Imprest funds and Blanket Purchase Agreements (BPAs) are not used.

UNITED STATES AIR FORCE, EUROPE
PROCUREMENT REGION--RAMSTEIN

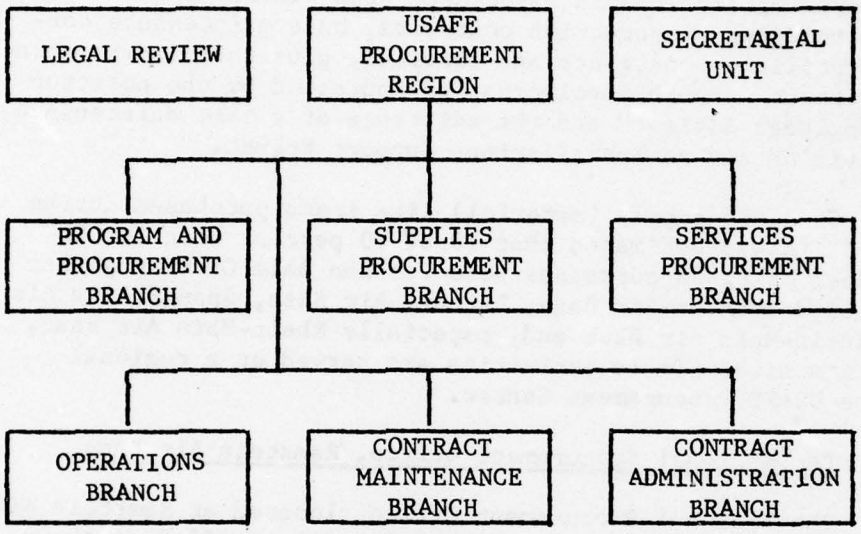



Figure XIV-7

A review of the "Emergency Vendor Source Lists" which include the most frequently used local contractors in the Region, shows that 28 of 33 vendors listed provide CE support items, such as hardware, plumbing and heating, electrical, paint, sanitation, lock, lumber and woodwork, and roofing materiel.

## c. BASE CIVIL ENGINEER (BCE) DATA

1. Introduction. BCE operations and materiel support were observed at three Air Bases: Ramstein, Hahn, and Rhein-Main. Ramstein and Hahn Air Bases are USAFE bases; Rhein-Main Air Base is under the management control of Military Airlift Command (MAC). Therefore, certain sets of data provided by USAFE apply to Ramstein and Hahn Air Bases and/or the Theater (less Rhein-Main). These cases will be identified in the following discussions.

2. BCE Functions and Operations

a. Mission. At installation level, the Air Force Civil Engineering Activity provides for the maintenance, operation and construction of Government owned real property facilities. Real

property facilities include fixed capital assets such as land and land interest, ground and structural facilities, utility systems, airfield pavements, storage facilities for fuels, roads, bridges, docks and buildings, etc.

b. Organization. Each Air Force Base has a CE staff to perform the necessary maintenance and repair work and provide, in most cases, the utilities. At Wing/Base level the Base Commander is provided with a standard Air Force (AF) engineering organization to operate and maintain the Base Facilities. The number of civilian and military personnel in the BCE organization varies from base to base according to the size and mission assigned with approximately 55% classified as a civilian workforce. Figure XIV-8 illustrates the preferred BCE organization structure for location of some sub-functions required at major AF installations.

c. Manning. Distribution of the BCE workforce percentage between civilian and military personnel at the three Air Force overseas bases visited appear similar. Most of the civilian workforce assigned to the BCE activity are indigenous personnel. We were advised that this allows for a greater degree of workforce stability in the overseas area, and the ability to perform programmed maintenance on locally procured (European) equipment and facilities without a prolonged training/orientation period as would be in the case of United States military personnel who rotate frequently. Table XIV-4 provides an overview of CE manning at each of the Air Force Bases visited.

Table XIV-4

BASE CIVIL ENGINEER MANNING
(Authorized Fiscal Year 1975)

| PERSONNEL AUTHORIZED | RAMSTEIN AB | RHEIN-MAIN AB | HAHN AB |
|---|---|---|---|
| Officer | 10 ( 1%) | 10 ( 2%) | 8 ( 1%) |
| Enlisted | 295 (34%) | 224 (44%) | 228 (43%) |
| Civilian | 559 (65%) | 270 (54%) | 299 (56%) |
| Total | 864 | 504 | 535 |

Source: Field Research

BASE CIVIL ENGINEER ORGANIZATION
U.S. AIR FORCE, EUROPE
CIVIL ENGINEER
INDUSTRIAL ENGINEERING
FAMILY HOUSING MANAGEMENT
SQUADRON SECTION AND ADMINISTRATION
OPERATIONS AND MAINTENANCE
PROGRAM'S
ENGINEERING AND CONSTRUCTION
FIRE PROTECTION
WORK CONTROL
PAVEMENTS AND GROUNDS
STRUCTURES
MECHANICAL
ELECTRICAL
ELECTRIC POWER PRODUCTION
SANITATION

Figure XIV-8

d. Support Requirements. To carry out the CE activities for the Base Commander, the BCE is assisted by three staff functions: the Industrial Engineering Branch, the Squadron Section and Administrative Branch, and the Family Housing Management Branch. There are also four major functional areas which report to the BCE, and as indicated in Figure XIV-8 may be expanded (or contracted) for improved efficiency. Each of the four major functional divisions are briefly discussed below.

(1) Operations and Maintenance. The Operations and Maintenance (O&M) Division is responsible for operating utilities and maintaining facilities, and as such probably is the most important CE function in the day-to-day operation of the base. It is to the O&M Division that the BCE looks for the maintenance of pavements and grounds, structures, mechanical systems, electrical maintenance and electrical power production, and sanitation. To coordinate the efforts of the six major functions within the O&M Division, a Work Control Center has been established to schedule and coordinate the work requirements to the appropriate work area(s). This effort includes matching available manpower, supply, and vehicle resources to scheduled work requirements, either within one shop area or into several.

(2) Programs. This Division is responsible for developing and submitting the Military Construction program to the Base Facilities Board for eventual submission to Headquarters, United States Air Force. The Materiel Control Branch operates a supply support function for the CE organization which will be discussed later in Paragraph 3 as a separate subject.

(3) Engineering and Construction. This Division provides technical assistance in the development of military construction and operation maintenance programs. It prepares engineering design studies and evaluates engineering surveys of facilities and systems. It also prepares the plans and specifications for contract work and provides technical and inspection services during base administered construction contracts.

(4) Fire Protection. This Division provides the base fire fighting capability. Also, it performs all crash-rescue and structural fire protection support as the base fire marshal.

e. Work Generation. Since the BCE directly supports the Air Force mission by providing maintenance to Real Property Assets (capital assets), various support requirements are generated to

rehabilitate and maintain these facilities. At the three locations in Europe, each had its own peculiarities of mission, size, and location which governed their requirements. Table XIV-5 portrays a background of real estate data which typifies the general basis for generating CE manpower and workload requirements. Hahn Air Base provided Figure XIV-9 as a facility location chart which provides some insight for Civil Engineering Support Requirements to off-base sites by an Air Force Base located in Europe.

f. Type of Work. Real Property Maintenance Activity (RPMA) work accomplished in the CE area is generally within four in-service methods: Service Calls, Recurring Maintenance, and Operations and Service Work.

(1) Service Calls. This is usually a verbal request for work required to correct any emergency condition. Examples are failure of any utility, fire protection, loss of heat, steam, or gas; clogged plumbing; critical air conditioning system failure, etc. This type of work requires immediate attention and is provided 24-hours-a-day, 7 days per week.

Table XIV-5

SUPPORT REQUIREMENTS

| | RAMSTEIN | HAHN | RHEIN-MAIN |
|---|---|---|---|
| Organizations: | | | |
| Air Force (Base) | 24 | - | 22 |
| Other (Base) | 49 | - | 24 |
| Off Base Sites/Orgs. | - | 7 | 88 |
| Buildings: | | | |
| Base Complex | 334 | 981 (facil- | 309 |
| Off Base Sites | 49 | 47 ities) | 23 |
| Off Base Housing Units | 81 (bldgs) | 747 | - |
| Land Area: (acres) | | | |
| Base Complex | 3,031 | 1,222 | 905 |
| Off Base Sites | - | 431 | 14 |

Source: Field Research

# 50TH CE SUPPORT REQUIREMENTS

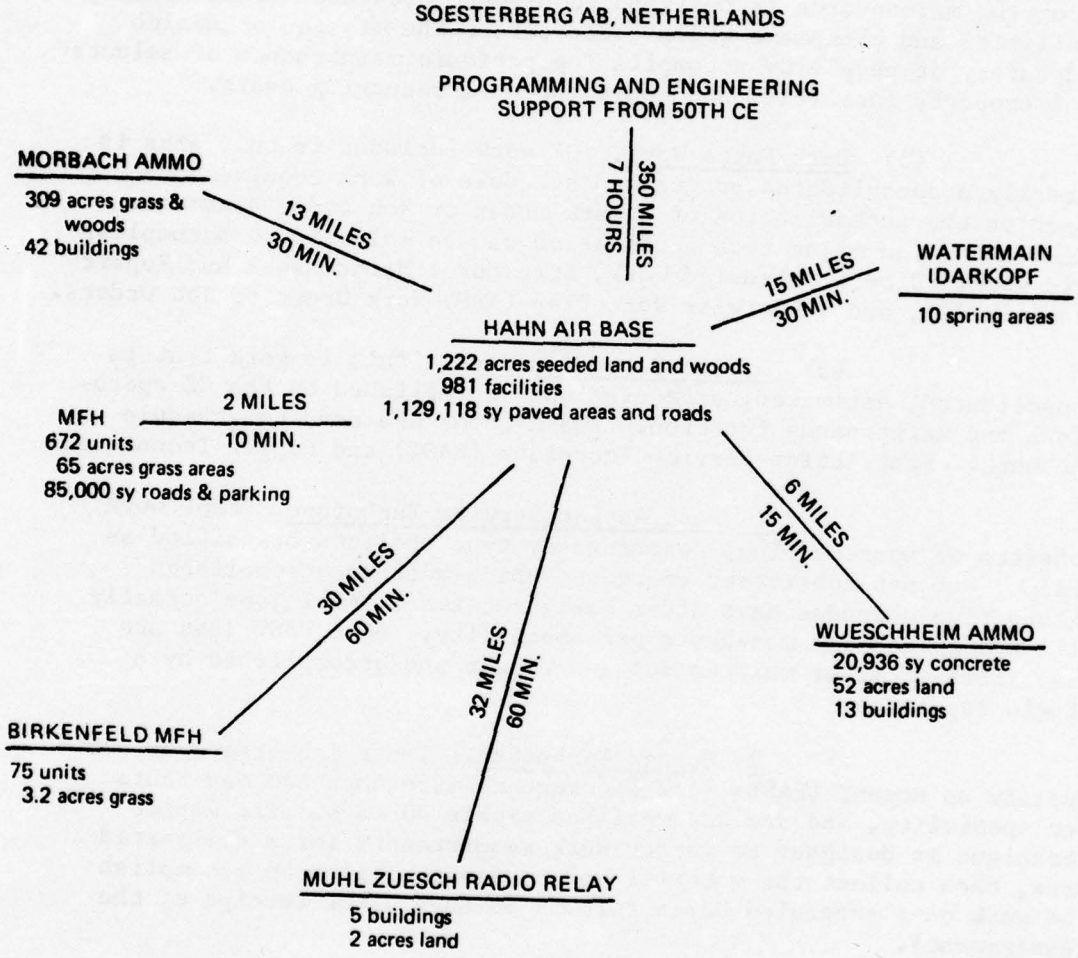



Figure XIV-9

(2) Recurring Maintenance. This type of work is pre-identified and is performed at specific repetitive intervals of at least once per year (except daily). Examples of this type work include servicing air conditioners, hangar (mechanical) doors, emergency standby generators, swimming pools, fuel dispensing systems, runway lights, vault alarms systems, warm air furnaces, etc. Recurring maintenance is designed to prevent breakdown of utilities, facilities and equipment which could offset the mission or health and safety of people by accomplishing periodic maintenance of selected real property facilities and equipment on a recurring basis.

(3) Task Force Work. CE work included in this area is normally a consolidated programmed schedule of work requirements based on the authorization of a work order or job order document. There are three major techniques which can be selected to accomplish this work: Direct Scheduled Work, Structural Maintenance and Repair Team (SMART), and In-Service Work Plan (IWP) Work Order or Job Orders.

(a) Direct Scheduled Work. This is work that is consolidated, estimated, scheduled and accomplished by the CE operations and maintenance function. Two methods are used to schedule the work: Fast Action Service Technique (FAST) and Hopper Technique.

1 Fast Action Service Technique. FAST work consists of nonrecurring, nonemergency type projects classified as urgent, but not considered emergency which must be accomplished within five calendar days after being received. FAST jobs normally will not exceed two man-hours per speciality. Most FAST jobs are classified as minor maintenance and repair and accomplished by a single repairman.

2 Hopper Technique. These job orders do not qualify as urgent (FAST) work and require more than two man-hours per speciality, and are accomplished within 30 days. The Hopper technique is designed to gather work requirements for a designated area, then collect the materiel and necessary skills to accomplish the work on a scheduled basis (within 30 days after receipt of the requirement).

(b) Structural Maintenance and Repair Team. When authorized, the SMART team consists of tradesmen of various skills who perform routine minor maintenance and repair work on selected high use facilities, i.e., mess halls, dormitories, libraries, gymnasiums, service clubs, etc. Examples of maintenance/repair work performed is broken floor tile replacement, replacement of flourescent lamps, repair leaking toilets and water faucets and/or inoperative

electrical outlets. Work can be classified as "homeowners maintenance," which can be accomplished with available bench stock materiel. Workman assigned to the SMART center usually operate through a prepositioned trailer/truck facility and perform the same maintenance functions as fixed operations and maintenance shops with a BCE complex.

(c) In-Service Work Plan and Job Order Accomplishment. IWP work order and job order accomplishments are work requirements which can be programmed for completion at a later time as part of a larger effort or through formal submission of a Base Civil Engineer Work Order (AF Form 327). Work performed under this category is programmed and is included in the IWP. The IWP identifies how the BCE operation and maintenance in-service manpower resources are to be used in the next twelve months period based on known and projected requirements for maintenance, repair, operation, services and BCE initiated minor construction projects having a cost of $500 ($100 Military Family Housing (MFH)) or less. The principal inputs into the IWP are: Facility Surveys--nonrecurring facility work requirements, approved work order request (AF Form 332), Base Civil Engineer Work Orders (AF For 327), Real Property Maintenance Requests (AF Form 1135), Service Calls, and Operation and Service Work.

(d) Operations and Service Work. This effort generally involves labor-type effort, and includes such areas as snow removal, pavement and runway cleaning, grass and ground maintenance, etc. Most important is the consideration that increases and decreases in labor requirements in this area could affect timely accomplishment of other planned work if adjusted without proper coordination.

g. Scheduling. When considering the various base civil engineering workloads requiring scheduling, the following table portrays the work accomplishment timeframes for the operations and maintenance shops. CE work is scheduled to be accomplished within the timeframe as shown in Figure XIV-10. Rhein-Main Air Base provided time-phase data regarding Routine Work Order Processing at that installation. It is considered typical of other BCE activities located in Europe (Figure XIV-11) and scheduling of BCE Work Orders is programmed accordingly.

h. Rescheduling. At each of the Air Force installations visited, BCE personnel advised that rescheduling of work orders because materiel was not being received within a reasonable timeframe was a significant problem area. However, specifics regarding numbers of work orders rescheduled and the items involved were not supplied

## WORK ACCOMPLISHMENT TIMEFRAMES

| AVENUE OF EFFORT | SERVICE CALL | DIRECT SCHEDULED WORK | | IWP WORK |
|---|---|---|---|---|
| | | FAST | HOPPER | |
| AUTHORIZATION DOCUMENT | Service Call | Job Order | Job Order | Work Order or Job Orders |
| TYPE OF REQUIREMENT | Repair (Emer) | All MFH and Base Urgent Minor M&R | Routine Base and MFH Minor M&R | Routine Major & Minor M&R and Minor Construction |
| ACCOMPLISHED BY | Shop DIN* | Team, Shop or DIN (when DIN NOT fully employed | SMART (If in the facility) Shop | Shop |
| | 48 hrs | 3 Day Delay Until Assignment | | |
| | ← 5 Days → | | | |
| | ← 1 Month → | | | |
| | ← 2 to 6 Months → | | | |

Source: AFR 85-1
*Do It Now Truck

Figure XIV-10

## WORK ORDER PROCESSING
(Routine)

| | APPROVAL | PLANNING | MATERIEL CONTROL | PROGRAM DEVELOPMENT |
|---|---|---|---|---|
| | 2 MONTHS | 1 MONTH | PER AFM 67-1 | PER AFR 85-1 |
| | | | ← AL-17 DAYS* → | |
| AWAITING BCE APPROVAL | Waiting to be batched into planning | Develop work plan and materiel requirements | (1 Day-6 Mo.) | Materiel should be complete a min. of 60 days prior to work start |
| | | | ← BW-84 DAYS** → (1 Mo.-1 Yr.) | |
| | | | ← CW-84 DAYS*** → (3 Mo.-1½ Yr.) | |
| | AWAITING PLANNING | IN PLANNING | AWAITING SUPPLIES | AWAITING SCHEDULING |
| | ← 5.5-----8.0 Months → | | | |

* AL: Vital Real Property
** BW: B-Work Order
*** CW: C-Work Order

Figure XIV-11

during the visit, nor was it provided after returning to CONUS. One activity stated that appliance parts were very difficult to obtain which resulted in numerous rescheduling of MFH work orders, another stated that of 240 work orders scheduled, 35% were rescheduled for lack of materiel; another stated that rescheduling of many work orders was the result of new item demands by BCE to supply (23% of all requisitions from BCE are First Time Demand).

i. Statistics. At Rhein-Main Air Base, the BCE utilized a total of 547,852 man-hours to accomplish all scheduled work orders. Figure XIV-12 provides an insight as to how the man-hours were utilized to satisfy the various in-service work order requirements generated during Fiscal Year 1975. The Ramstein Air Base Civil Engineer activity workload for Fiscal Year 1975 is shown in Table XIV-6.

Table XIV-6

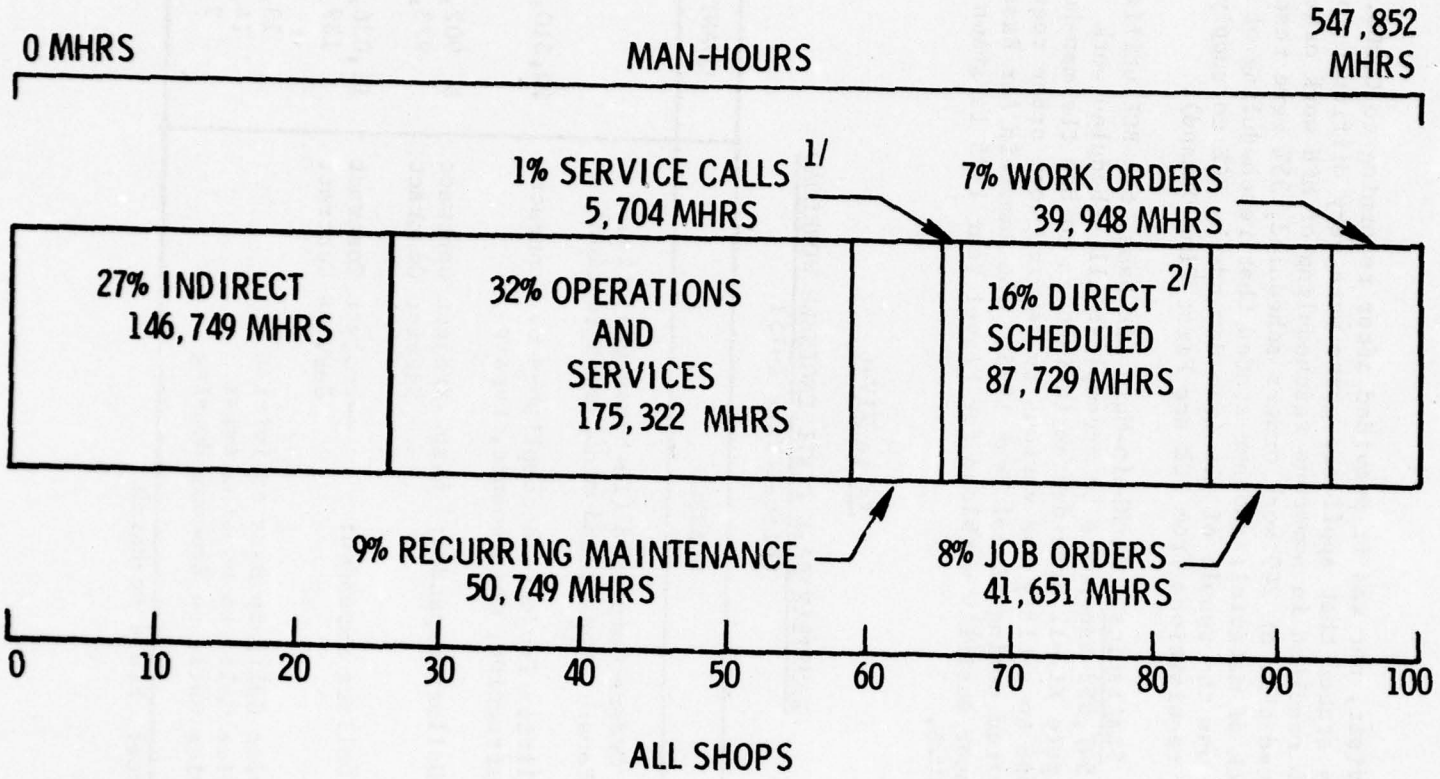
RAMSTEIN BASE CIVIL ENGINEER WORKLOAD
(Fiscal Year 1975)

| SUBJECT | QUANTITY |
|---|---|
| Work Orders Completed (In-house projects, maintenance repair and minor construction) | 777 |
| Facilities Projects Accomplished by Contract (Construction, maintenance, repair) | $2,510,968 |
| O&M Dollars Expended: Base--Project Contract | $ 902,435 |
| Service Contract | 973,142 |
| MFH Dollars Expended: --Project Contract | $1,036,128 |
| Service Contract | 189,743 |
| Service Calls to Base Activities | 13,484 |
| Service Calls to Housing Areas | 14,866 |
| Service Calls to Economy Housing | 2,205 |

Source: Field Research

HOW CE SPENT IN-SERVICE MAN-HOURS FOR FY 1975

RHEIN MAIN AB




ALL SHOPS

1/ Emergency Type

2/ Work within 30 days FAST Response Type Requests

Figure XIV-12

3. Supply Support for BCE

Figures XIV-13 and XIV-14 "BCE Work Order Requirements" and "Procurement Requirements," respectively, chart the materiel support process for each Air Base from initiation of a requirement by the CE through supply and procurement.

At the point of materiel identification in the BCE organization, the BCE planners and materiel control personnel make extensive use of the United States Air Force, Europe, Supply and Equipment (USAFESAE) Catalog as a materiel identification tool in addition to the usual vendor catalogs. To the extent the USAFESAE identification numbers are used they are fed into the USAFE 1050 program and used as identification means on procurement documents.

Based on an analysis of BCE requisitions on hand as of a given date, USAFE estimated that materiel sources for the BCE work orders are:

| SOURCE | PERCENT |
|---|---|
| Local Purchase | 66% |
| DSCs | 19% |
| AFLCs | 7% |
| GSA | 6% |
| DAAS Excess | 2% |

As shown in Figure XIV-13 all requisitions regardless of source of supply are routed through Base Supply; conversely materiel is received by base Supply and subsequently released to the BCE. Miscellaneous BCE materiel support statistics for Rhein-Main and Hahn Air Bases and the overall command (USAFE) (for quarter ending September 1975) are shown in Table XIV-7.

C. PROCUREMENT

1. Ramstein Air Base. Procurement support for the BCE Ramstein is provided by the Regional Procurement Office, Ramstein. A review of 40 transactions confirmed that:

--All transactions were accomplished via purchase order or delivery order;

--Some deliveries were effected using United States Army Procurement Agency Europe (USAPAE) Indefinite Delivery Type Contracts (IDTCs);

# CIVIL ENGINEER WORK ORDER REQUIREMENTS

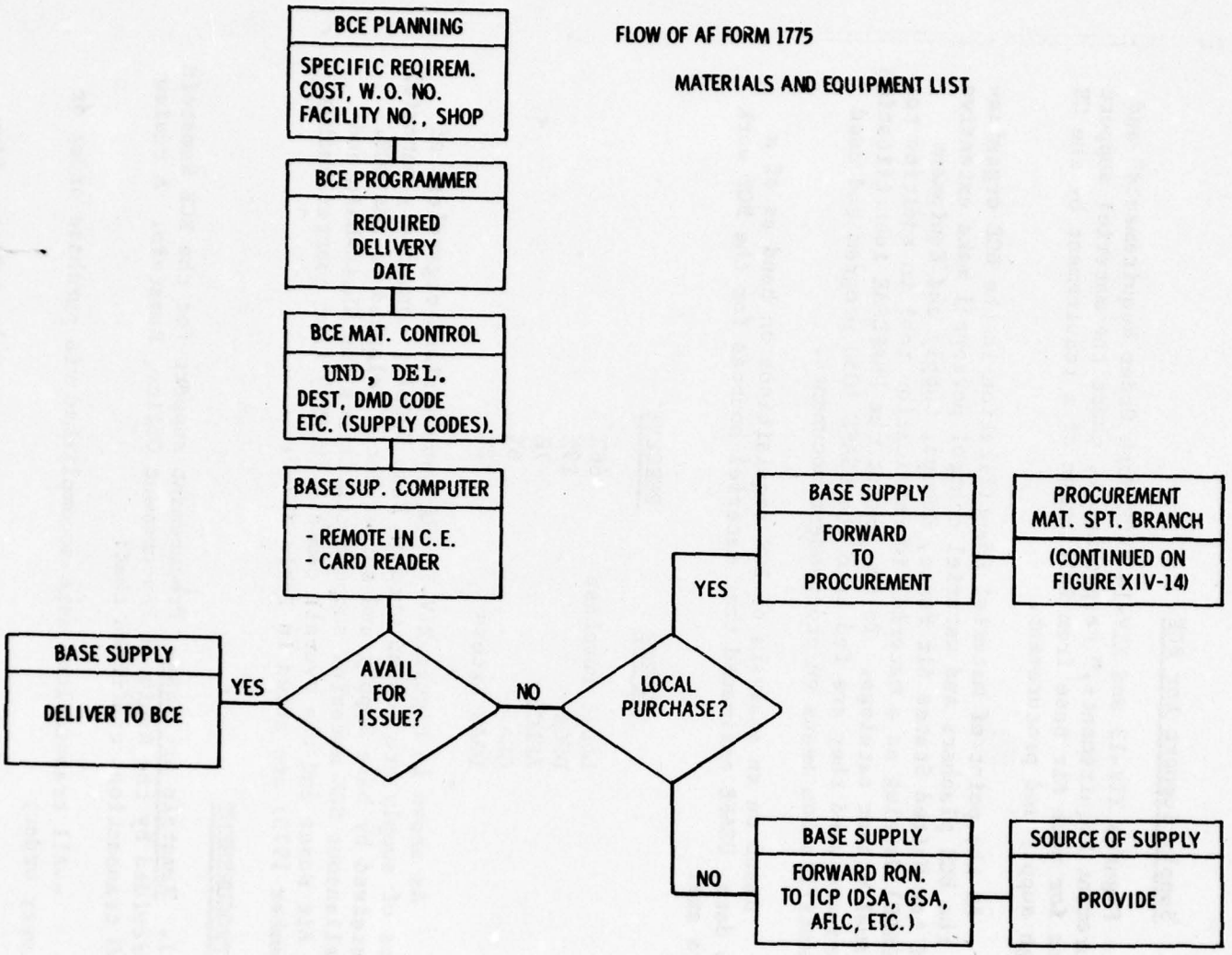



Figure XIV-13

## PROCUREMENT REQUIREMENTS

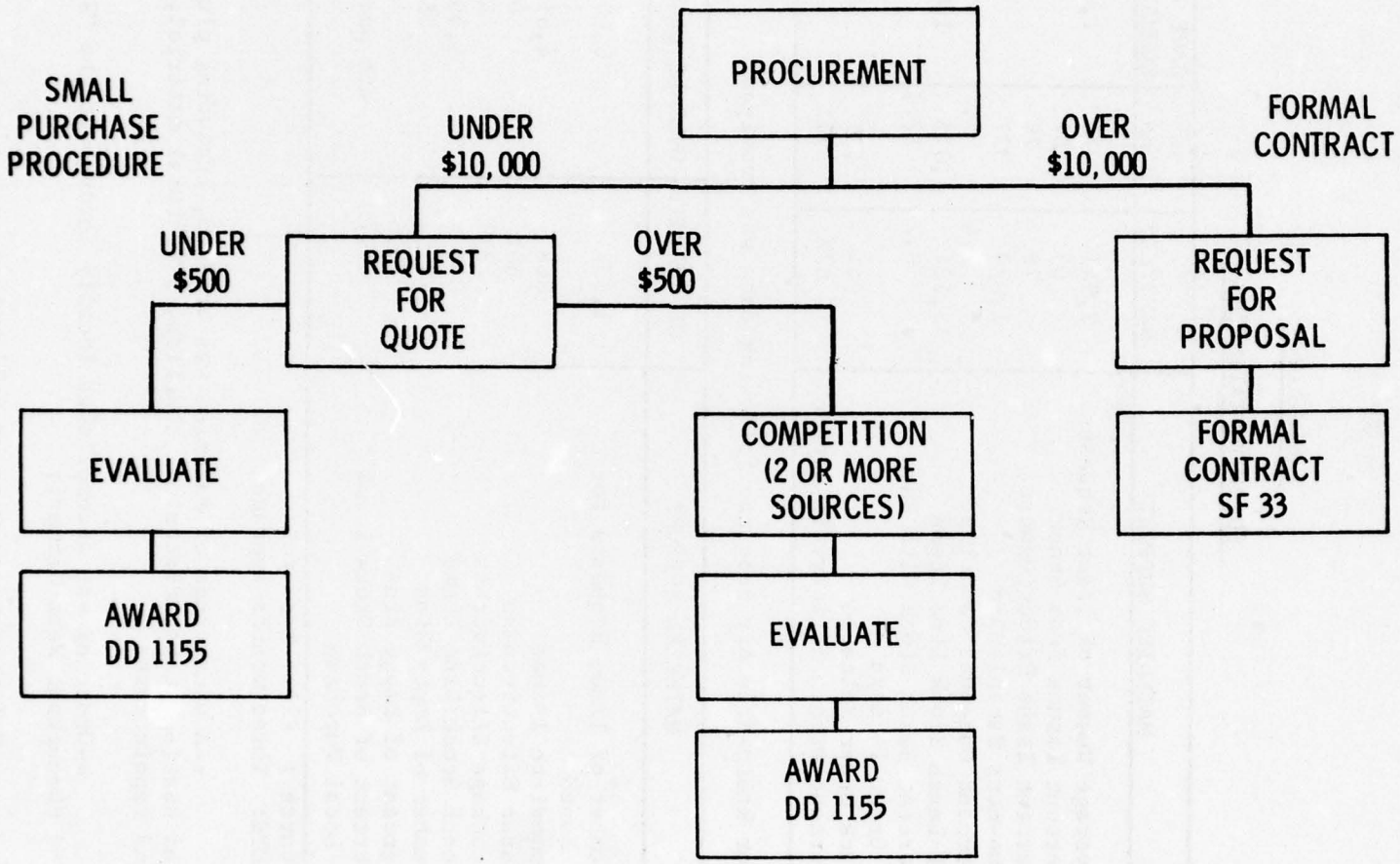



Figure XIV-14

Table XIV-7

SUPPORT STATISTICS

| MATERIEL SUPPORT | RAMSTEIN | HAHN | BASE AVERAGE COMMAND-WIDE |
|---|---|---|---|
| Average Number of Issue Requests | 2,941 | 1,470 | 1,026 |
| Percent Issues from Stock | 65 | 62 | 63 |
| Percent Issue Effectiveness | 78 | 77 | 75 |
| Due-outs Established | 1,029 | 337 | 387 |
| Percent Due-outs Cancelled | 7.4 | 7.7 | 10.5 |
| CE Bench Stock Line Items | 3,221 | 1,075 | 1,018 |
| Percent Bench Stock with Back Order 14 days | 8.7 | 12.0 | 12.6 |
| Back Order Releases | 944 | 507 | 383 |
| Percent within Military Timeframe | 67% | 91% | 65% |

For Rhein-Main Air Base the following data was provided:

| MATERIEL SUPPORT | CE SUPPORT | OVERALL BASE SUPPORT |
|---|---|---|
| Number of Issue Requests for Month | 1,337 | 6,607 |
| Immediate Issues | 868 | 4,617 |
| Issue Effectiveness | 60% | 68% |
| Stockage Effectiveness | 78% | 86% |
| Bench Stock Line Items | 866 | 4,454 |
| Number of Empty Bins | 92 | 369 |
| Percent of Empty Bins | 10.6 | 8.3 |
| Percent of Bench Stock Items Local Purchase | 49.7% | not provided |

Source : Field Research
NOTE: Three months average

--A wide range of materiel was ordered, including plumbing and heating items, electrical supplies, structural materiel, hardware, and repair parts;

--Ordering was accomplished locally throughout the "Region" and throughout West Germany;

--Delivery times were as follows:

| DAYS | NUMBER OF ITEMS | PERCENT |
|---|---|---|
| Less than 10 | 7 | 17.5 |
| 11-20 | 9 | 22.5 |
| 21-30 | 3 | 7.5 |
| 31-45 | 5 | 12.5 |
| 46-60 | 3 | 7.5 |
| 61-90 | 10 | 25.0 |
| over 90 | 3 | 7.5 |

Most actions contained a single line item.

2. Hahn Air Base

Hahn Air Base has four procurement personnel (two military and two local nationals). These personnel are limited to performing procurement services for: (1) contract maintenance, (2) local contract administration, and (3) small emergency buying. Procurement of supplies is limited to buying/ordering mission essential items, with the approval of the Base Commander.

All buys are by Purchase Order/Delivery Order (PO/DO). DOs are limited to Base Exchange and/or Buy United States Here (BUSH) contracts. From April to November 1975 the following supply buys were made by PO or DO:

| | For BCE | For Other For Other Than BCE | Total |
|---|---|---|---|
| Number of Orders | 28 | 95 | 123 |
| Number of Line Items | 51 | 268 | 319 |
| Dollar Value | $33,144 | $62,115 | $95,259 |

Delivery times for the 51 BCE items were as follows:

| DAYS | NUMBER OF ITEMS | PERCENT |
|---|---|---|
| 10 or less | 39 | 77 |
| 11-20 | 12 | 23 |
| over 20 | 0 | 0 |

Distance to vendors was as follows:

| DISTANCE | ITEMS | PERCENT |
|---|---|---|
| 50 miles or less | 35 | 70 |
| 50-100 miles | 12 | 23 |
| over 100 miles | 4 | 7 |

Types of items purchased included paint, hardware, electrical parts, steel wire, floor tile, concrete pipe, and bulk items such as gravel, ash, stone, asphalt, and cement.

The vast majority of BCE purchase actions are accomplished by the Regional Procurement Office Ramstein. A review of work orders/ project order folders indicated that deliveries based on Regional PO/DOs ranged from 14 to 113 days with a median of approximately 60 days. The same review showed deliveries from CONUS (depot shipped and CONUS procured items) ranged from 20 to 118 days for the same "type" of items.

A concurrent review of 22 plumbing items on a single work order showed that:

--Sixteen items were ordered in Germany using "PV Numbers" (USAFESAE identification) and had delivery times from 20 to 105 days.

--Four items were ordered in Germany using LOO numbers (local identification) and had delivery times from 20 to 105 days.

--Two items were ordered from CONUS using National Stock Numbers (NSNs) and had delivery times of 20 to 106 days.

BCE and Supply personnel at Hahn Air Base were conducting a monthly review (which was continuing) of "empty bench stock bins" for three materiel categories as follows:

| MONTH (1975) | BCE | 66-1 AIRCRAFT MAINTENANCE | VEHICLE MAINTENANCE |
|---|---|---|---|
| Feb | 7.93 | 6.04 | 3.62 |
| Mar | 4.92 | 5.14 | 3.21 |
| Apr* | 3.58 | 2.66 | 1.65 |
| May | 4.76 | 4.32 | 3.48 |
| Jun | 12.06 | 4.92 | 9.27 |
| Jul | 12.44 | 3.35 | 3.86 |
| Aug | 11.02 | 3.04 | 5.41 |
| Sep | 12.95 | 3.87 | 6.29 |

* Month local procurement capability was virtually eliminated.

The BCE and Supply personnel indicated that the loss of Base procurement capability had significant impact on the higher percentages of empty bins for vehicle and BCE support--with the greatest impact on BCE, because of its extensive dependence on procurement.

3. Rhein-Main Air Base

Rhein-Main Air Base had six procurement personnel (one military, one Department of the Air Force (DAF) civilian, and four local nationals). Materiel buys are limited to "emergencies." Buys are effected using POs/DOs and Imprest Funds. Buys for the BCE are minimal. From July to November 15, 1975 approximately 63 CE line items were purchased on an emergency basis. Most were obtained in the Frankfurt area; a few came from the Wiesbaden-Mainz area. Of the 63 items, 26 were electrical, five were paint, five were locks, and four were lumber.

The vast majority of BCE purchase actions are effected by the USAFE Procurement Center (Lindsey Air Station) in Wiesbaden. A review of work order folders indicated that deliveries based on Procurement Center POs/DOs ranged from one day to 112 days with about two-thirds of the items received in 60 days or less. The same source showed deliveries from CONUS (depots or procurement) of 22 to 102 days with about three-fourths received in 60 days or less.

BCE personnel noted a switch in "local" vendors with the movement from Base Procurement to Regional Procurement. For example: an electrical supplies vendor outside of the Rhein-Main Air Base gate (near Frankfurt) was replaced by a Wiesbaden area vendor.

D. INDIVIDUAL ITEM RESEARCH. Information regarding current work orders and items affecting Bills of Materials (BOMs) is provided for each installation visited:

1. Hahn Air Base

a. Summary BOM Data

| Work Order | 1 July 1975 | 12 November 1975 |
|---|---|---|
| --On Hand: | 76 | 128 |
| --Incomplete: | 16 | 76 |
| --Complete | 48 | 52 |

Work Data (1 July through 12 November 1975)

| | |
|---|---|
| --Work Orders Received: | 63 |
| --Total Work Orders Received: | 172 |
| --Work Orders Released: | 44 |
| Total on-hand | 128 |

b. Item Data (as of 18 December 1975)

(1) Work Order (W/O) Number 1440--Repair by replacement two each Fire Station stall doors, for Morbach Ammo Storage. (One line item required). Following item on order: 5670L0000255620 Door 148, 5" x 148.5" two each, ordered on 4072, Priority BW 08, RDD 4130 GNO, Initial Status BB, Current Status BP 6006 Requisition Number FB5620521059802.

(2) W/O Number 1443--Modify the existing Fire Alarm system in Supply Warehouse, Building 501. (Ten line items required, eight line items received). Following items an order: 5975PV02-5825 Rail 20 x 8 x 0.8 mm 30 MR ordered on 5260, Priority CW 15, RDD 5289 JBB, current status--None. Follow-up one each, 5325 Requisition Number FB562053140626, 6230L0020345620 Light Obstruction eight each, ordered on 5260 Priority CW 14 RDD 5289 JBB, current status BD 5327 Requisition Number FB56205800849.

(3) W/O Number 1453--Alter door to secure Room 4, Building 1403, 2184 Command Squadron (21 line items required, 20 line items received) following item on order: 7105P9188Y14 Mirror Spotter one each, ordered on 4071, Priority BW 08, RDD 4120 GNO, current status BV 5268, follow-up nine each Requisition Number FB56204074036.

(4) W/O Number 1554--Repair by replacement Master Circuit Breaker Box at Base towers (18 line items required, 17 line items received) following item on order: 5930W52029808 Switch Electric one each, ordered on 5189, Priority CW 14, RDD JBB, current status BV 5332 follow-up one each Requisition Number FB562052029808.

(5) W/O Number 1587--Rehabilitate base gym latrines (31 line items required, 30 line items received) following items on order: 4730PV01-7885 Bend Pipe two each ordered on 5189 Priority CW 14 RDD 5213 JBB, current status BD 5373 Requisition Number FB562053250208.

(6) W/O Number 1830--Replace broken window pane and replace broken light fixtures in Room 208, Building 316 (three line items required, two line items received, correct one each received wrong item, reordered on 5307) following item on order: 6210L0018365620 Fixture lighter one each, ordered on 5307, Priority BS 08, RDD 5320 JBB, current status BD, 5321 Requisition Number FB562053081485.

(7) W/O Number 1859--Construct a 22' x 36' classroom without facility 1002. (27 line items required, 26 line items received) following item on order: 564008470235 Wall Board 45 BD, ordered on 5105 Priority CW 14 RDD 5213 GNO to GDD, initial status BM, current status BD 5342 Requisition Number FB562052170046.

(8) W/O Number 1743--Maintenance of base grounds, cut and grade, remove stumps, replace drain pipe, (six line items required, five line items received). Following item on order: 5680WP52029805 Cover, Manhole, six each ordered on 5192 Priority CW 14 RDD 5244 JBB, current status BV Requisition Number FB562052152020.

(9) W/O Number 2084--Install two each radiators in FAB branch and NDI offices. (Thirteen line items required, six line items received). Following items on order: 4520PV02-8910 Radiators Section 30 each, ordered on 5192, Priority CW 14 RDD 5244, JBB, current status BD 6008 Requisition Number FB562053250210; 4520PV02-8800 Bracket 300 mm four each, ordered on 5192, Priority CW 14 RDD 5244 JBB, current status BD 6008 Requisition Number FB562053250209; 4520PV02-8857 Holder Rod four each, ordered on 5192 Priority CW 14 RDD 5244 JBB, current status BD 6008 Requisition Number FB562053250211; 4730PV01-7286 Nipple Rod 60 each, ordered on 5192 Priority CW 14 RDD 5244 JBB, current status--None, Requisition Number FB562053420087; 4730PV01-7327 Bushing four each, ordered on 5192, Priority CW 14 RDD 5244 JBB, current status BD 6008 Requisition Number FB562053250215; 4730PV01-7385 Plug left four each, ordered on 5192 Priority CW 14 RDD 5244 JBB, current status BD 6008, Requisition Number FB562053250219; 4730PV01-7386 Plug right four each, ordered on 5192 Priority CW 14 RDD 5244 JBB, current status BD 6008 Requisition Number FB562053250213.

(10) W/O Number 1564--Replace floor covering in family housing (one line item required) following item on order: 7220L0025645620 Carpet olive 70 SY, ordered on 5112, Priority CW 14 RDD 5213, JBG to JBB, current status BD 5296 Requisition Number FB562052460162.

2. Ramstein Air Base

a. Summary BOM Data.(as of 5 November 1975). Table XIV-8 contains a summary of BOM data.

b. Item Data (as of 5 November 1975)

(1) W/O Number A44176--Remove key and padlock arrangement from all exit doors and install panic-type hardware, ordered 19 April 1974 (nine line items required), 5340L0086985612 Lock, door panic six each, cost $150 each, Status: No status (appears to be cancelled and not reordered). Rescheduled December 1975. Original: August 1974. Total Cost $900.

(2) W/O Number 44347--Install three-inch galvanized drainage pipe along old Autobahn, ordered 22 August 1974, (one line item required, wrong item ordered--reordered 14 October 1975). Original: November 1974, Scheduled March 1975, Rescheduled October 1975. Total Cost $2,332.

Table XIV-8

BILLS OF MATERIALS SCHEDULED FOR WORK

| DATE SCHEDULED | TOTAL SCHEDULED | BOM MATERIEL ON-HAND | BOM MATERIEL INCOMPLETE | RESCHEDULED* MATERIEL ON-HAND |
|---|---|---|---|---|
| 1975 | | | | |
| July | 91 | 52 | 13 | 26 |
| August | 107 | 42 | 31 | 34 |
| September | 123 | 73 | 30 | 20 |
| October | 92 | 38 | 45 | 9 |
| November | 73 | 18 | 36 | 19 |
| December | 56 | 14 | 40 | 2 |
| 1976 | | | | |
| January | 65 | 7 | 47 | 11 |
| February | 38 | 6 | 23 | 9 |
| March | 41 | 11 | 7 | 23 ** |
| Total | 686 | 261 | 272 | 153 |

Source: Field Research

*W/O that were scheduled at later dates, but as materiel was received and BOMs completed, were rescheduled for input to current BCE workload.

**Planning not completed.

(3) W/O Number A45172--Replace five Polythylen Batteries Forks ordered March 1974, (17 line items required) 4520PF58040 ordered March 1974, work order scheduled March 1975, rescheduled December 1975, Status: October 1975 under technical review; one line item Tank Oil 2000 liter plastic.

(4) W/O Number A45280--Replace hoist assembly, ordered 19 February 1974, (one line item required) 3950L006535612 Hoist chain, electric design lg, 15 feet, ordered August 1974, reordered February 1975, Status: none.

(5) W/O Number 45281--Replace hoist assembly, ordered 19 February 1974, (one line item required) 3950L006535612 Hoist chain, electric design lg, 15 feet, ordered August 1974, reordered February 1975, Status: none.

(6) W/O Number 45282--Replace hoist assembly, ordered 19 February 1974 (one line item required) 3950L006535612 Hoist chain, electric design lg, 15 feet, ordered August 1974, reordered February 1975, Status: none.

3. Rhein-Main Air Base

a. Summary BOM Data (as of 7 November 1975)

| WORK ORDER PRIORITY | NUMBER | TOTAL LINE ITEMS OUTSTANDING | LINE ITEMS SATISFACTORY STATUS | LINE ITEMS UNSATISFACTORY |
|---|---|---|---|---|
| A | 7 | 69 | 19 | 50 |
| B | 47 | 268 | 88 | 180 |
| C | 122 | 450 | 122 | 328 |
| TOTAL | 176 | 787 | 229 | 558 |

b. Item Data (as of 31 October 1975)

(1) W/O--Renovate SP offices 75796, Supply Priority CW-14, date ordered 15 August; date required 7 November; (19 line items received, six items due-in).

(2) W/O--Secure Building 463, Supply Priority AL-8, date ordered 29 August; date required 15 September; number days late 46; (81 line items received, eight items due-in).

(3) W/O--Job Control, Building 27 (40186), Supply Priority AL-3, date ordered 22 August; date required 8 September; number days late 53, (119 items received, 34 items due-in).

(4) W/O--ACC, Building 27, Supply Priority AL-7, date ordered 8 October; date required 25 October; number days late 6; (101 line items received, 23 items due-in).

(5) W/O--Maintain AYA, Supply Priority BW-8, date ordered 29 August; date required 17 November; (48 line items required, two items due-in).

(6) W/O--Vault Door, Building 30, Supply Priority AL-2, date ordered 8 October; date required 25 October; estimated delivery date 19 August 1976; number days late 6; (0 line items received, two items due-in).

(7) W/O--Renovate AYA, Supply Priority CW-14, date ordered 17 June; date required 9 September; number days late 53; (80 line items received, 16 items due-in).

(8) W/O--Modify Photo Lab, Supply Priority BW-8, date ordered 24 September; date required 17 December; (three line items received, four items due-in).

(9) W/O--Install two doors, Clinic, Supply Priority CW-14; date ordered 7 July; date required 29 September; date last item received 22 September (all items received).

(10) W/O--Replace Exhaust Duct, 150, Supply Priority BW-8, date ordered 13 May; date required 5 August; date last item received 25 July; (all items received).

(11) W/O--Reinstall Boiler 345, Supply Priority BW-8, date ordered 28 May; date required 20 August; number days late 72; (135 line items received, five items due-in).

(12) W/O--Building Console 140, Supply Priority CW-14, date ordered 18 March; date required 19 July; date last item received 11 September; number days late 93; (all items received).

(13) W/O--Steel Grating, POL (75856), Supply Priority BW-8, date ordered 24 June; date required 16 September; number days late, 46; (six line items received, two line items due-in).

(14) W/O--Replace 28 Light Covers, Supply Priority CW-14, date ordered 31 December 1974; date required 25 March; number days late 220; (two line items received; three items due-in).

## CHAPTER XV

## KADENA AIR BASE

### A. MANAGEMENT DATA

1. Overall Organization. Kadena Air Base houses the 18th Tactical Fighter Wing (TFW), whose organization chart is shown in Figure XV-1. The facilities engineering function is assigned to the 18th Civil Engineering Squadron, part of the 18th Combat Support Group. Supply support is provided by the Chief of Supply, while procurement support is furnished by the Okinawa Procurement Center.

2. Facilities Engineer Organization. The Base Civil Engineer (BCE) (18th Civil Engineering Squadron) is responsible for maintenance, repairs, and minor construction and alterations to base buildings and grounds, and for operation/furnishing of utilities. The organization of the Kadena BCE for the accomplishment of these functions is shown in Figure XV-2. Manpower authorized for the accomplishment of these functions is shown in Table XV-1.

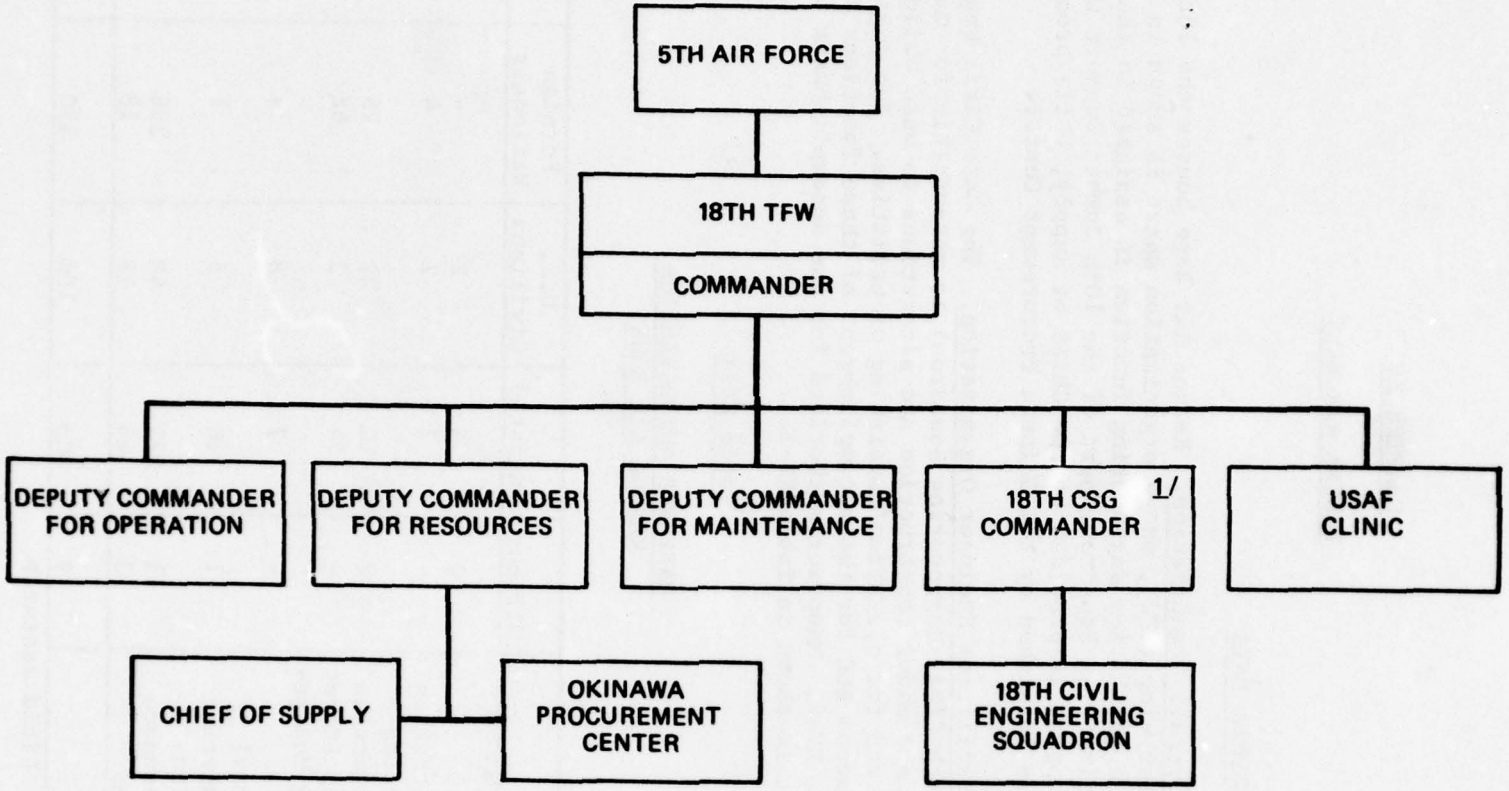
Table XV-1

MANPOWER AUTHORIZATION
KADENA AIR BASE

| | Officer | Enlisted | U.S. Civilians | Foreign Nationals | Total |
|---|---|---|---|---|---|
| Command | 2 | 4 | 2 | - | 8 |
| Administration | - | 2 | 2 | 4 | 8 |
| Engineering & Construction | 2 | 10 | 22 | 25 | 59 |
| Fire Department | - | 54 | 3 | 62 | 119 |
| Housing Management | - | 7 | 8 | 4 | 19 |
| Industrial Engineering | 1 | 10 | 5 | 1 | 17 |
| Operations & Maintenance | 1 | 272 | 40 | 356 | 669 |
| Programs | 3 | 44 | 18 | 18 | 83 |
| Total | 9 | 403 | 100 | 470 | 982 |

Source: Field Research

**KADENA AIR BASE**
**18TH TACTICAL FIGHTER WING (TFW)**




1/ Combat Support Group

Figure XV-1

**BCE ORGANIZATION**
**KADENA AIR BASE**

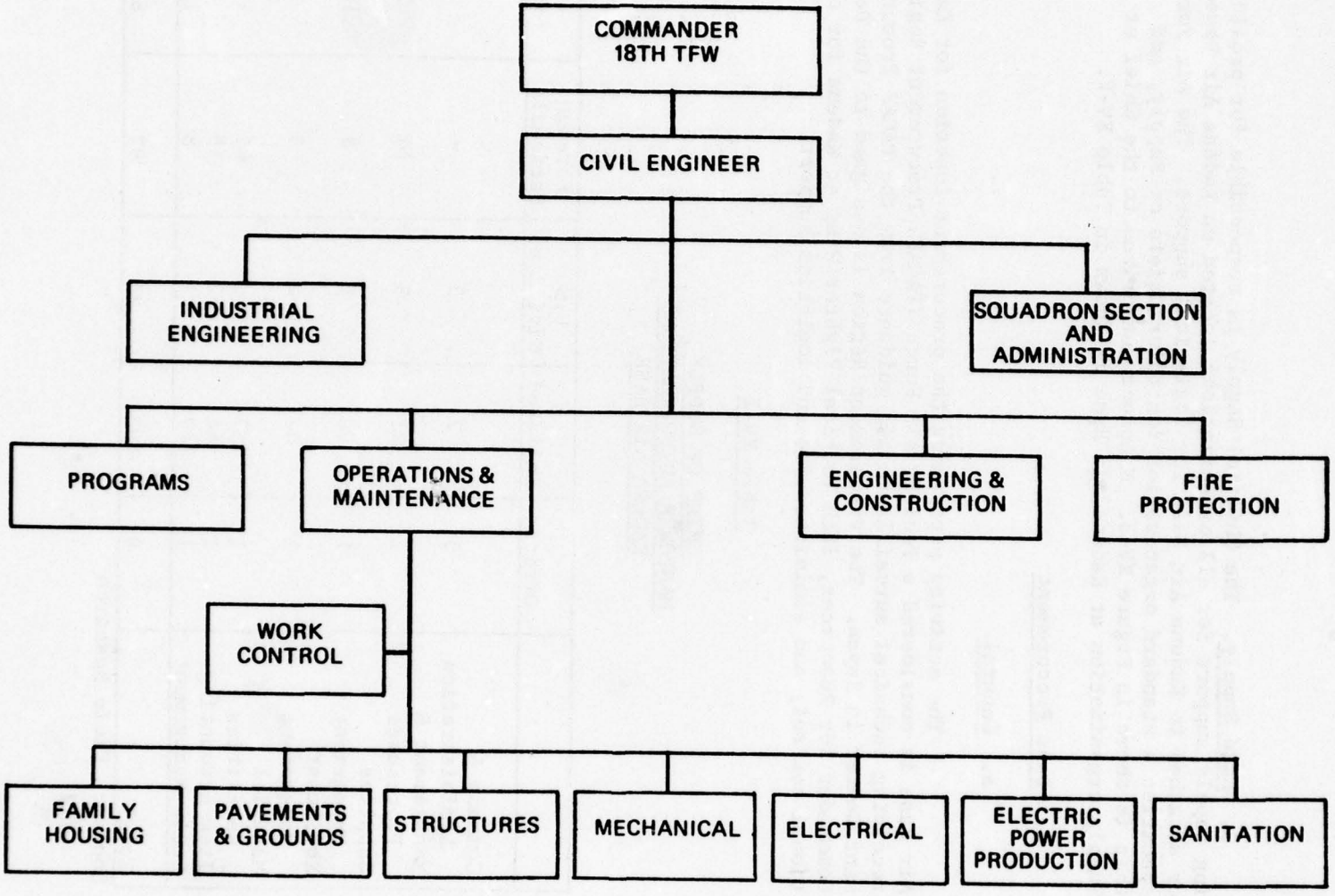



Figure XV-2

3. Base Supply. The Chief of Supply is responsible for providing supply support for all organizations located on Kadena Air Base, or attached to Kadena Air Base for logistical support. The Air Force specifies a standard organization for thier Chiefs of Supply, and this is shown in Figure XV-3. Manpower authorized to the Chief of Supply organization at Kadena Air Base is shown in Table XV-2.

4. Base Procurement

a. General

The activity performing the procurement function for Kadena Air Base is considered a Pacific Air Force (PACAF) Procurement Region receiving technical surveillance and guidance from the PACAF Procurement Center in Japan. The Procurement Region is assigned to the Deputy Commander for Resources, 18th Tactical Fighter Wing at Kadena for operational control, and administrative and logistics support.

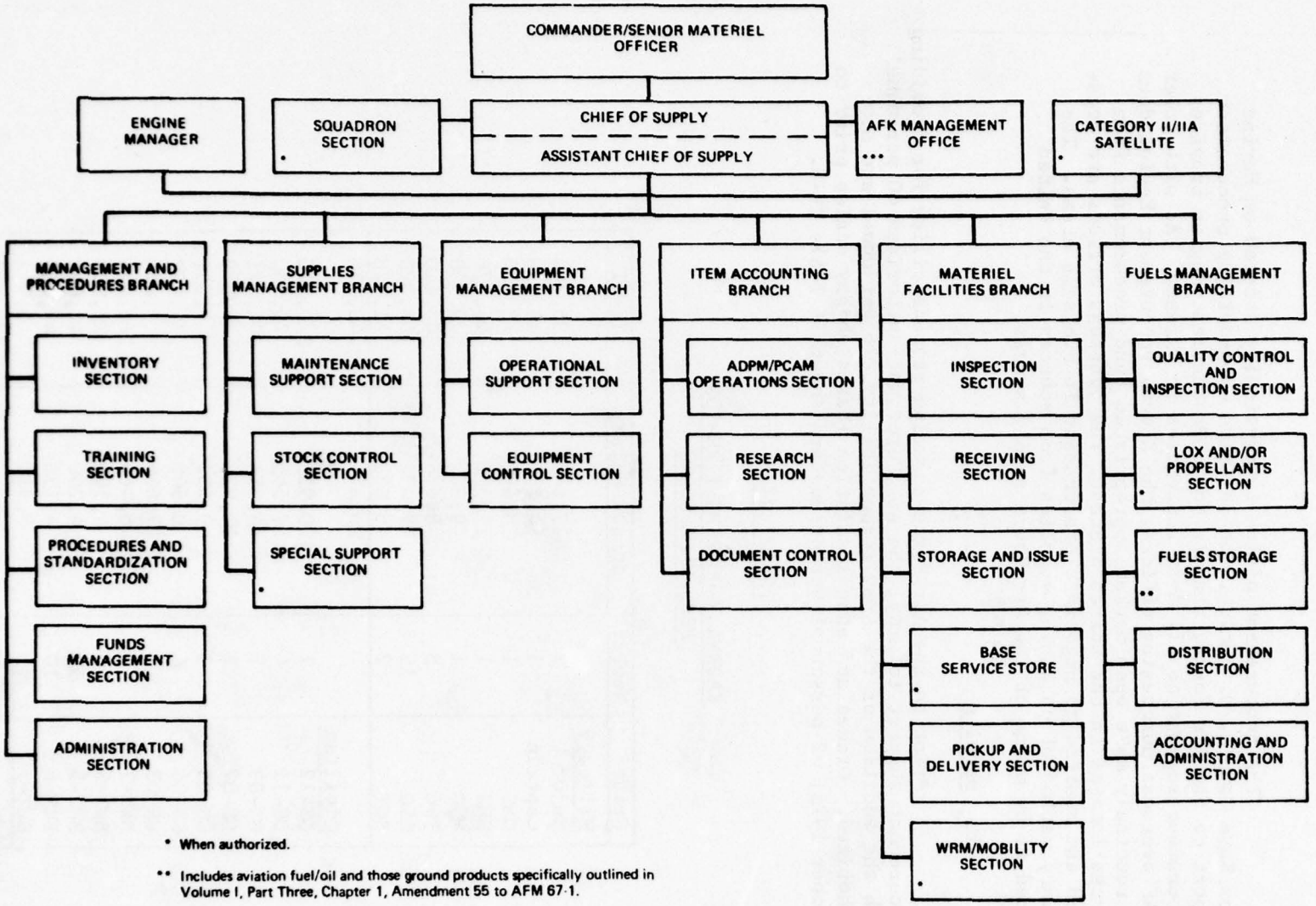
Table XV-2

CHIEF OF SUPPLY
MANPOWER AUTHORIZATIONS
KADENA AIR BASE

| | Officer | Enlisted | U.S. Civilians | Foreign Nationals | Total |
|---|---|---|---|---|---|
| Command & Administration | 3 | 7 | 3 | - | 13 |
| Management & Procedures | 1 | 21 | 5 | 10 | 37 |
| Supplies Management | 1 | 90 | 6 | 8 | 105 |
| Equipment Management | 1 | 47 | 4 | 3 | 55 |
| Materiel Facilities | 1 | 137 | 2 | 45 | 185 |
| Item Accounting | 1 | 46 | 2 | 18 | 67 |
| Fuels Management | 1 | 147 | 1 | 8 | 157 |
| Total | 9 | 495 | 23 | 92 | 619 |

Source: Field Research

## KADENA AIR BASE




* When authorized.

** Includes aviation fuel/oil and those ground products specifically outlined in Volume I, Part Three, Chapter 1, Amendment 55 to AFM 67-1.

*** Authorized only when AFK account is officially designated and when it is not assigned to another base organization.

Figure XV-3

The procurement office is physically located on Marine Corps Base Camp S. D. Butler. In addition to providing procurement support to the Air Force, the Air Force Procurement Region provides procurement support to all Army activities in Okinawa. As with other PACAF overseas purchasing offices, the Kadena Procurement Region does not routinely make open market appropriated fund procurements from sources located in the United States. The overseas offices are organized and staffed to negotiate procurement in overseas areas. The primary method of obtaining supplies from sources in the United Stated is by means of the Air Force supply system.

b. Manning

Prior to the Air Force assuming responsibility for providing procurement support to Army, the Air Force was authorized 40 personnel. With the addition of the Army responsibility, 76 personnel are now authorized. Grades and annual salaries (based on pay scales prior to October 1975) of personnel authorized are shown in Table XV-3.

Table XV-3

KADENA PROCUREMENT REGION
PERSONNEL COSTS

| Grade | Number | Annual Salary | Total |
|---|---|---|---|
| Military | | | |
| Major | 2 | $17,640 | $35,280 |
| Captain | 1 | 14,436 | 14,436 |
| CMS | 1 | 13,656 | 13,656 |
| SMS | 1 | 11,376 | 11,376 |
| MSG | 1 | 9,900 | 9,900 |
| TSG | 5 | 8,688 | 43,440 |
| SSG | 15 | 7,092 | 106,380 |
| SGT | 2 | 5,988 | 11,976 |
| | | Total | $246,444 |
| Civilian | | | |
| GS-12 | 1 | $20,923 | $20,923 |
| GS-11 | 4 | 17,545 | 70,180 |
| GS-09 | 7 | 14,553 | 101,871 |
| GS-07 | 2 | 11,924 | 23,848 |
| GS-05 | 1 | 9,632 | 9,632 |
| GS-04 | 4 | 8,608 | 34,432 |
| GS-03 | 1 | 7,664 | 7,664 |
| BWT-7 | 2 | 6,468 | 12,936 |
| BWT-6 | 5 | 4,580 | 22,900 |
| BWT-5 | 10 | 4,200 | 42,000 |
| BWT-4 | 10 | 4,136 | 41,360 |
| BWT-3 | 1 | 3,912 | 3,912 |
| | | Total | $391,658 |

Source: Field Research

Total personnel cost to perform procurement functions for Air Force and Army is:

| | |
|---|---|
| | $246,444 |
| | 391,658 |
| | $638,102 |

The above salaries are basic pays. They do not include the quarters and subsistence allowances for military, cost of living allowance for U.S. civilians, or bonuses paid to local national (BWT-grades) civilians.

5. Basic Supply Statistics

| | | | |
|---|---|---|---|
| Line Items: | Total | 71,549 | |
| | BCE | 3,328 1/ | (4.7%) |
| Annual Demand, FY 1975 ($000) | | | |
| | Total | $11,976 | |
| | BCE | 3,543 | (29.6%) |
| Inventory ($000) | | | |
| | Total | $23,671 | |
| | BCE | $362 1/ | (1.5%) |

1/ As of 6 November 1975.

6. Supply Operating Costs. The annual civilian payroll for the Chief of Supply organization totaled $213,100 for U.S. nationals plus $571,000 for foreign nationals.

B. BASE CIVIL ENGINEER (BCE) DATA

1. Functions and Operations

a. Types of Work. Work done by the BCE covers normal maintenance, repairs, minor construction and/or alterations to base buildings, grounds, utility systems, and facilities and the furnishing of utilities.

(1) Maintenance work consists of work such as applying protective coating, joint sealing of runways and roads, grass-cutting and vegetation control, maintaining electrical, air-conditioning and heating systems and performing the general maintenance of installation buildings and miscellaneous facilities.

(2) Repair work consists of replacing roofing, repairing roadways, and such systems as water, sewage, and electrical distribution. The replacing of air-conditioning compressors, electrical transformers and portions of utilities systems are considered as repair work.

(3) Direct Scheduled Work

(a) Structural Maintenance and Repair Team (SMART) work technique is utilized for high use areas such as dormitories, dining halls, and service clubs. The SMART team usually consists of a four man crew of varying crafts that can perform minor repairs like replacing or repairing doorknobs, leaking plumbing, or inoperative electric lighting switches.

(b) Fast Action Service Technique (FAST) utilizes a team comprised of one or more craftsmen and one or more skills to accomplish urgent (not emergency) work on base facilities and military family housing. FAST work is to be accomplished within five to seven days.

(c) HOPPER work covers those jobs which do not qualify for accomplishment under FAST and SMART. Hopper work is grouped by base area and/or skill and held for a period of time so as to effectively use the labor force. Hopper work is to be accomplished within 30 days after identification.

(4) Minor construction and alterations work involves in-house man-hours and is limited to such work as additions to parking lots, additions to or reconfiguration of buildings, laying short sections of sidewalk. Minor construction should not exceed 5% of the available direct man-hours, and is also controlled by dollar limitations, e.g., work up to $10,000 can be approved by the base commander; $10,000 to $50,000 requires major air command approval and over $50,000 is considered military construction and requires Headquarters, United States Air Force and Department of Defense (DoD) approval. Project approval levels are as follows: $25,000 for repairs to a building; $50,000 for maintenance to a building. Headquarters USAF can approve urgent minor projects up to $100,000 but over that amount must be approved by the DoD.

b. Workload Generation. Work can be customer and/or internally generated the most common sources from which work initiates are as follows:

(1) Customer submits AF Form 332 (Work Request) to the BCE.

(2) Building custodian providing request for building maintenance on AF Form 1135 (Real Property Maintenance Request).

(3) Self help work identified on AF Form 332.

(4) Facilities surveys and annual inspections from which maintenance and repair requirements are written up to keep facilities in a good state of repair. Results of surveys and inspections are converted into a mechanized report which reflects the work that is to be done. The report also programs the year the work should be performed.

(5) Service calls may be made to the service desk for emergency or urgent work. Request for urgent work, not considered an emergency can also be submitted on AF Form 1135. Emergency work is expected to be performed within 48 hours. Service calls can on occasion require materiel that must be requisitioned, however, in most instances bench stock is sufficient.

(6) Job orders are small jobs usually performed by a single shop using bench stock. Work of the job order classification is initiated by preparation of AF Form 1879 (Base Civil Engineer Job Order).

(7) Work orders apply to work that requires the utilization of more than one shop (e.g., painting, carpentry, and electrical) and usually requires the use of materiel that must be ordered or requisitioned on an individual basis. The preparation of AF Form 327 (Base Civil Engineer Work Order) when duly reviewed and signed is authorized to perform the work discussed on the document. Work orders generally require a drawing or sketch and a Bill of Materials (BOM). The idea of the work to be done is referred to a planning technician who describes the work and makes a list of the materiel required and prepares the following:

(a) AF Form 1081 (Job Phase Calculation Sheet) which describes the work and tasks to be performed.

(b) AF Form 1445 (Materials and Equipment List) which lists the items required for the work. Supply action is begun by the Materiel Control Section after the work order is reviewed, approved and financing is established.

c. Scheduling. Work accomplishment depends upon an organized mix of man-hours and materiel that requires detailed scheduling. Work is initially programmed on an annual basis and is carried out by the

In-Service Work Plan (IWP) which is prepared on an AF Form 919 (In-Service Work Plan). The IWP is programmed on a month to month basis but work is scheduled on an hour to hour basis. The IWP provides a means whereby man-hours for job orders/work orders are computed after reserved man-hours (operations and service, service calls, equipment maintenance, direct scheduled work and recurring work) are subtracted from projected available man-hours. The portion of the IWP pertaining to job orders and work orders is further managed by the Production Control Center through which all instructions and information pass to and from the work force. The center consists of a series of visual charts which reveals the status of IWP work for the current month and 6 future months. A work order entering the system could progress as follows:

6th Future Month - Planning must be complete.
5th Future Month - Funds must be available.
4th Future Month - Materiel must be ordered.
3rd Future Month - Materiel on order.
2nd Future Month - Materiel must be 100% by end of the next month.
1st Future Month - Materiel must be 100% by end of current month.

Current Month - Work must be completed by end of current months.

The progress of a work order can depend to a large degree on the decision made in weekly work scheduling meeting. Man-hours and materiel are resources that cannot always be easily managed and causes rescheduling which follows in the subsequent paragraph.

d. Rescheduling. A variety of reasons, e.g., command interest, weather, labor strikes, changes in scope of work and supply delays can cause a rescheduling of work orders. The matter of materiel and supplies is of primary importance to this data collection. Normally it is planned to have materiel and supplies on hand before work scheduling; however, long leadtime (270 days in some instances) can have an adverse effect on well made plans. All materiel should be on hand by mid-November 1975 for work that is scheduled for accomplishment during January 1976. Supply is now being planned for work to be done in September 1976. Work orders are rescheduled when the estimated delivery dates of materiel and supplies are unfavorable. It is estimated that about 1,000 jobs a year required rescheduling for some reason (not always supply), which results in a shuffling of craft personnel to perform other work. The activity maintained no records from which man-hour losses or customer dissatisfaction from work rescheduling could be measured.

2. Supply Support

a. Sources of Supply

(1) Bench Stock. Stocks of supplies located in the individual work centers are called bench stocks. The bench stock consists of items applicable to the work of the shop and are intended primarily for service calls, job orders, and work orders. Bench stocks are managed by the BCE; however, levels are actually computed by the base supply activity. The procedure at Kadena Air Base calls for a daily review of bench stocks to determine items in an out of stock position. Replacements for out of stock items are often delivered within three days. Base supply conducts a weekly walk through of the bench stock areas. The over-the-counter bench stock operation has three personnel in attendance and craftsmen use AF Form 1469 (Materiel Cost Transfer for BEAMS) to draw items over $25, no form is required for items under $25. Bench stocks are BCE owned inventory having a value of $106,258 and consisting of 2,715 line items. Consumption of bench stock is estimated to be between $78,000 and $99,000 monthly. The base is consolidating bench stock into one location which will be attended by assigned personnel.

(2) Special Levels. Items for standby or contingency support; e.g., electrical transformers and large watermain valves are protected in inventory as special levels. Special levels are also applied to seasonal items and those items reserved for anticipated use. The BCE submits requests for changes to special level on a quarterly basis; however, the actual level is the prerogative of base supply. Special level items are base supply stock funded inventory until issued to the BCE. As of 20 September 1975 this consisted of 305 line items with an estimated value of $246,741.

(3) Residual Area. Materiel left over from a work order completion or cancellation are placed in a special section of the BOM holding area. The items are held six months for possible utilization on another work order or as bench stock. A listing of the items is prepared and screened for possible use on subsequent job orders or work orders. Items held are air-conditioning components, pumps, lavatories, elbows, fittings, paint, concrete blocks and numerous other CE type materials. Items are returned to base supply after being held for six months if no foreseeable need exists. Base supply gives credit for about 25% of the materials turned in. The residual area contained 214 line items having an estimated value of $118,845 and is BCE owned inventory.

(4) Holding Area for Bills of Materials (BOMs). BOM items reflected on AF Form 1445 as a part of a job order or work order are accumulated in a holding area for a job order or work order number. Items not available from BCE bench stock or the residual area are requisitioned from base supply. Base supply will issue the item to the holding area when in stock, or if not in stock a backorder is created. The BCE is sent a DD Form 1348-1 (DoD Single Line Item Release/Receipt Document) as items are received and placed in the holding area. The job order/work order is forwarded to the IWP programmer (end future month, 60 days) for work scheduling. BOM materiel is withdrawn from the holding area when the authorized shop foreman or craftsman signs the reserve side of AF Form 1445 which lists the items. Monetary value of materiel on hand in the holding area as of 8 October 1975 was:

| | |
|---|---|
| Work Orders | $695,140 |
| Job Orders | 62,969 |
| Total | $758,109 |

(5) Base Self Service Store. The BCE obtains administrative and certain janitorial supplies from the base self service store. Estimate is that the supplies have an annual value of $38,000 to $45,000.

(6) Other Sources. The BCE obtains about 100 items per year from other Services or activities. The supplies are transferred without reimbursement but transportation must be furnished.

3. Statistics

a. Work Orders as of 8 October 1975:

(1) Value of Materiel On-Hand and Due-In:

| | No. of WOs | Value of Materiel On-Hand | Value of Materiel Due-In |
|---|---|---|---|
| BOMs complete | 134 | $203,611 | --- |
| BOMs incomplete | 169 | 491,529 | $544,691 |
| Total | 303 | $695,140 | $544,601 |

(2) The 303 WOs represent an estimated 140,00 man-hours at $7.00 per hour = $980,000

(3) Period of time BOMs in Holding Area for WOs:

| | Completed BOMs in Holding Area | Incompleted BOMs in Holding Area |
|---|---|---|
| Under 30 days | 20 | 25 |
| Over 30 days | 17 | 20 |
| Over 60 days | 21 | 26 |
| Over 90 days | 14 | 23 |
| Over 120 days | 23 | 21 |
| Over 180 days | 12 | 21 |
| Over 240 days | 22 | 31 |
| Over 365 days | 5 | 2 |
| | 134 | 169 |

b. Job Orders as of 8 October 1975:

(1) Value of Materiel On-Hand and Due-In:

| | No. of JOs | Value of Materiel On-Hand | Value of Materiel Due-In |
|---|---|---|---|
| BOMs complete | 437 | $62,969 | -- |
| BOMs incomplete | 823 | -- | $160,781 |
| Total | 1,260 | $62,969 | $160,781 |

(2) Man-hours and dollar value represented by the 1,260 job orders was undetermined.

(3) Period BOMs in Holding Area for JOs (a partial computation).

| | Completed BOMs in Holding Area (IWP) | Completed BOMs in Holding Area, FAST, HOPPER Service Calls |
|---|---|---|
| Under 30 days | 26 | 24 |
| Over 30 days | 37 | 11 |
| Over 60 days | 35 | -- |
| Over 90 days | 64 | -- |
| Over 120 days | 86 | -- |
| Over 180 days | 58 | -- |
| Over 240 days | 61 | -- |
| Over 365 days | 35 | -- |
| | 402 | 35 |

c. Total value of BOMs in the holding area 8 October 1975:

| | |
|---|---|
| Work Orders | $695,140 |
| Job Orders | 62,969 |
| | $758,109 |

d. Direct production man-hours for Fiscal Year 1975 were 869,379 for a labor value of $6,095,653 of which an estimated 34% was consumed for work orders and job orders.

C. BASE SUPPLY

1. Supply Support to the BCE. Supply support to the BCE at Kadena Air Base is provided by the Chief of Supply through three sources.

a. Bench Stock

(1) Type of Items. The bench stock is limited to expendable Economic Order Quantity (EOQ) type items. Although they are assigned an Air Force management code which carries implications of a low price, there is no constraint on bench stock items in terms of their unit price. Basically, items are selected for bench stock by the requiring organization--e.g., the BCE--and the supply computer automatically calculates the appropriate stock level based on past consumption; however, items are expected to have four or more demands in 180 days to merit positioning in bench stock.

(2) Authorized Stock Level. Bench stock is authorized to hold 30-days consumption, calculated by the supply computer. Stocks are located in the BCE area and managed by BCE personnel. The retention limit for bench stocks is set at 150% of the authorized level, and the reorder point is 50% of the authorized level.

(3) Stock Replenishment. Replenishment is based on a weekly walk-through of the bench stock area by supply personnel, to identify items which have reached their reorder point; the BCE personnel managing the bench stock are responsible for identifying (by tagging the bins) those items which are at or are approaching a zero balance. There is a complete monthly inventory of all bench stock assets. Stock replenishment actions are automatically accomplished by supply personnel, and it was estimated that normal replenishment action require about two days. The bench stock represents a "forward" location for required materiel, with the primary level of these items located in base supply.

(4) Funding. Bench stock assets are bought by the BCE with O&M funds when the materiel is positioned in the bench stock bins. The BCE can restrict the use of his funds to replenish his bench stocks, thus reducing his available assets. On the other hand, the supply computer automatically checks for fund availability before replenishing bench stocks, and the unavailability of funds for a particular organization will cut off the flow of replenishment assets.

(5) Excesses. Since materiel in bench stock is owned by the using organization, return of excesses raises the question of credit. Bench stock assets beyond the retention limit (i.e., over 150% of the authorized 30-day stockage objective) are removed from bench stock by base supply personnel based on their monthly inventory. If these quantities are within the base supply requisitioning objective but within the base supply retention limit, the materiel is accepted by base supply but no credit is given. Items must have a minimum of one demand in 180 days for retention in bench stock. Deletion from bench stock is based on quarterly computer reviews; the computer will recommend deletion after a 90-day period with no demand, and will direct deletion from bench stock after a second 90-day period with no demand.

(6) Statistics. Kadena Air Base supply supports a total of 140 bench stock locations, with the BCE having 20 of these. A comparison of BCE bench stocks to total base bench stocks as of 25 June 1975.

| | Base Supply Total | BCE Amount | BCE % |
|---|---|---|---|
| Line Items | 15,456 | 2,715 | 17.6% |
| Authorized Stockage* | $505,433 | $98,618 | 19.5% |

* No data is maintained on the current inventory of bench stock items; this can only be obtained by an actual physical inventory.

b. Base Service Store (BSS)

(1) Type of Items. The BSS serves as the source of janitorial and administrative supplies for all supported activities.

(2) Authorized Stock Levels. Authorized stock levels for items in BSS are the same as for items held by base supply, discussed below. Unlike bench stock items, for which backup stocks are held by base supply, total base stocks of items in the BSS are held in the BSS.

(3) Stock Replenishment. Routine stock replenishment action occurs as a result of the input of monthly inventory figures into the base supply computer. This automatically results in a levels recomputation and, if appropriate, stock replenishment action. Interim replenishment action, as required, is accomplished by BSS personnel--as with regular replenishment, this is done by entering the current inventory balance into the supply computer.

(4) Funding and Issue Procedures. Materiel in BSS is owned by Air Force Stock Fund, and is paid for by the customer when drawn. Sales are made by the customer walking the aisles of the store and selecting desired items. Sales are in dollar terms, with a single billing containing no itemized listing of the materiel which has been bought.

(5) Excesses. The base supply computer recommends excessing actions based on the updated monthly inventory data.

(6) Statistics. The Kadena Air Base BSS carried an estimated 625 line items. Data was not available on the value of the authorized stock level, but the most recent on hand inventory totaled $28,000. Sales during the second half of Fiscal Year 1975 averaged $115,100 per month, while Fiscal Year 1976 sales to date (four months) averaged about half that amount, $58,700 per month.

c. Base Supply Stocks

(1) Type of Materiel. Base supply is the source of all materiel not obtained by the BCE from either of the two sources already discussed.

(2) Authorized Stock Levels. Reparable items are stocked based on two or more demands within 180 days; nonreparable items are stocked based on four or more demands within 180 days. The actual authorized levels are calculated by the base supply computer in accordance with the standard Air Force system established in AFM 67-1.

(3) Funding. Materiel in base supply is in the Air Force stock fund. Limitations on the local portion of the stock fund can be accommodated by programming the base supply computer to adjust the "buy" portion of any stock level computation in order to conserve limited funds-- no action would be taken to adjust the computation itself.

(4) Issues. Issues are initiated by a request for materiel to the Chief of Supply. For most supported organizations, this can be accomplished by telephone or by delivering a request document. However, the BCE has a remote terminal, operated by supply personnel, and this permits materiel requests to be input directly into the base supply computer. This input can result in: (1) a materiel release order (MRO) to the base supply warehouse; (2) a requisition to the appropriate CONUS inventory control point; or, (3) a requisition to Purchasing and Contracting (P&C) for local procurement action. (P&C also has a remote terminal--this permits them to receive purchase

requirements from base supply and furnish status back to base supply.) Ordinarily, base supply will deliver materiel to BCE, with delivery standards as follows: Issue Priority Group (IPG) I requirements, 30 minutes; IGP II requirements, 4 hours; and IPG III requirements, within 24 hours.

(5) Excesses. The retention limit on base supply stocks is the requisitioning objective plus one year's consumption. Unless identified with an "exception code," items are automatically processed as Air Force excess when they are excess to base supply requirements. Items with an exception code are reported to the items managed in lieu of automatic excess action; it was estimated that about 800 items in base supply carried excess exception codes.

2. Base Supply Sources

a. Local Purchase

(1) Type of Materiel. On-island purchases are generally limited to common BCE supplies, such as hardware, doors, concrete, and paints, and are of Japanese manufacture. CONUS local purchase is used to obtain items marked in the Management Data List as local purchase, and to support work orders for items which could not be obtained through the wholesale supply system. Local purchase is also used to obtain part-numbered items; however, if P&C is unable to identify a source, the requirement is rejected to base supply, which submits a part-numbered requisition to the manager of the appropriate commodity group.

(2) Supply Procedure. Local purchase is requested by the submission of a hard copy Military Standard Requisitioning and Issue Procedures (MILSTRIP) requisition to P&C, supported by a DD Form 1348-6, Non-NSN Requisition (Manual), which describes the desired item. The Uniform Materiel Movement and Issue Priority System (UMMIPS) is used in requesting procurement action from P&C.

b. DoD Inventory Control Points (ICPs)

The "normal" supply source for ICP-managed items was identified as the Defense Supply Agency--specifically, the Defense Construction Supply Center (DCSC).

Requisitions for ICP-managed items are automatically produced by the base supply computer based on a computer request which either reduces assets below the reorder point, or is for an item which is not carried. In these requests, the BCE is authorized to use

the Force Activity Designator (FAD) of the activity being supported; routine materiel not otherwise identifiable to a specific customer is requisitioned using FAD IV.

As status is received on ICP requisitions, these are screened by the BCE to identify those with an unsatisfactory Estimated Delivery Date (EDD). The BCE is authorized to request that base supply bypass the ICP and request P&C to take local purchase action to obtain items with an unsatisfactory EDD--it was estimated that about six high priority requirements per month bypassed the ICP and were obtained through local purchase.

The bulk of the BCE requirements were drawn from the DoD ICPs. Of the total of $3.5 million base supply sales to BCE in Fiscal Year 1975, $2.5 million (71%) were items drawn from ICPs.

c. U.S. Army Garrison, Okinawa (USAGO)

"Makiminato," apparently the Directorate of Industrial Operations of USAGO, was identified as the source for such materiel as lumber, gases, and administrative supplies. This source is used either to deplete Army excesses or to support Air Force customers on items out of stock at base supply.

An estimated $500,000 per year has been drawn from this source for the support of all Air Force customers.

d. General Services Administration (GSA). Materiel was requisitioned from GSA Region #10 in Seattle, Washington, in accordance with source of supply information contained in the item record in the base supply computer. The requisitioning process involves the submission of MILSTRIP requisitions via transceiver.

D. BASE PROCUREMENT

1. Local Purchase

a. Criteria for Local Purchase

Blanket Purchase Agreements (BPAs) are established with 60 vendors on Okinawa. BPA purchases up to $500 may be made without competition. BPA purchases over $500 but less than $5,000 must be made with competition.

Purchase Orders (POs) and Delivery Orders (DOs) are used for purchases above $5,000, or for any amount, when considered advantageous to the U.S. Government.

Imprest Funds are use solely for purchases made in behalf of the Army up to a maximum of $150 per transaction. The Air Force relies more on BPAs and POs.

Because of Gold Flow restrictions, purchases above $500 but less than $10,000 require a Gold Flow approval statement by the Wing or Base Commander. Purchases above $10,000 must be approved by higher headquarters.

Under contracts issued to Japanese contractors which contain a clause requiring U.S. manufactured supplies, tax exemption certificates are issued to the contractor for items bought in the United States. These certificates allow foreign contractors to bring supplies into Okinawa without having to pay import taxes.

Buy United States Here (BUSH) contracts are available and are used when delivery requirements can be met; when the dollar values are above the minimum dollar amounts that the contractor feels will provide him with a sufficient return for his efforts; or when below the maximum dollar amounts that the Government feels are appropriate to spend with a single contractor.

b. Procedures

All requests for purchase are received by the Procurement Office with the necessary fund citation prior to negotiating a purchase. Requests received from base supply contain a stock fund citation, while requests not processed through base supply, such as requests from the Army, contain the appropriated fund (O&M) citation. This allows the procurement function to make purchases with the assurance that contractors will receive payment for services rendered or supplies provided.

Consolidation of like requirements takes place where feasible, but requests for purchase are not held for consolidation purposes.

Local purchase of items normally obtained from central sources (GSA, DSA) takes place on an emergency basis only. When it does occur, the request is made only to satisfy the requirement causing the emergency. The procurement officer challenges requests for local purchase when P&C feels the item should be obtained through central sources.

c. Availability of BCE Supplies on Okinawa

A meeting was held with BCE shop chiefs and a procurement specialist to determine if a larger amount of supplies could be purchased on Okinawa in lieu of using the central supply system. It was

learned at this meeting that many end items now being installed by contract are of Japanese manufacture. Moreover, Japanese hardware has been used in newly constructed dormitories. Reports by shop chiefs present at the meeting are as follows:

- Exterior Electric
  - Metric tools - (wrenches, sockets, taps, and dies) have shown an increasing need and are more readily available on Okinawa.
  - Splice kits are more readily available.

- Air Conditioning
  - Electric hot water heaters are not available.
  - Oil hot water heaters must be purchased locally.

- Housing Maintenance
  - Doors are available locally, are as inexpensive as American made doors, and are considered superior to those obtained from central supply sources.
  - Glass is available.
  - Plumbing supplies of American manufacture are available.
  - Paint - specifications are questionable.
  - Door locks are considered good.
  - Appliances and parts are not available on Okinawa. Foreign appliances are considered inferior to American manufactured appliances.

- Interior Electric
  - Materiel available on Okinawa are estimated to be twice as high in price as those obtained through central sources.

- Pavements and grounds
  - Asphalt, cement, and gravel is available.
  - Sickles for grass cutting. American made sickles are obtained through central sources, but Japanese made sickles are available and preferred by personnel using them.

- Barrier Maintenance
  - Fifteen percent of the generator parts can be obtained locally.

- Metals
  - Aluminum and stainless steel metals are available. Galvanized metals are available but are considered inferior to American galvanized metals.

It is evident from this meeting that, even if authority was given to buy more supplies locally, many items would still have to be obtained from stateside sources.

2. Local Purchase Statistics

The following is the Fiscal Year 1975 dollar volume of procurements by type of purchase instrument used:

| | |
|---|---|
| Contracts | $6,481,540 |
| Purchase Orders | 4,456,820 |
| Imprest Fund | 1,865 |
| Blanket Delivery Orders | 34,091 |
| Blanket Purchase Agreements | 287,181 |
| Modification | 500,365 |
| Utilities and other contracts | 18,901,605 |
| Total | $30,663,467 |

A sampling of 91 local purchase transactions made by the Air Force in Okinawa showed that it took:

(1) An average of 2.9 days for procurement to place the order on local vendors after the order had been received from the customer's organization.

(2) An average of 8.7 days for the customer to receive an item from the time he ordered it.

(3) An average of 1.8 items were ordered per local purchase transaction.

E. INDIVIDUAL ITEM RESEARCH

Nine long-standing work orders caused by materiel shortages were screened. The findings of the screening are:

1. Work order was delayed for lack of 3/4 inch pipe. The pipe originally ordered by BCE 21 May 1974, but not ordered by base supply. BCE reordered the pipe on 4 June 1975, and it was requisitioned by base supply on 6 June 1975. The status from the CONUS supply source indicated the item was being prepared for shipment on 3 July 1975. As of 4 November 1975, the pipe had not been received. The work order was rescheduled three times because of the indefinite delivery date of the pipe.

2. Work order was delayed for lack of explosive proof lights. The lights were ordered by the BCE on 18 March 1975, and requisitioned by base supply on 24 March 1975. The status received from the CONUS supply source was an indefinite status indicating that as of 28 October 1975, the lights are on back order. Because of the inability to plan for definite receipt of the lights, the work order was rescheduled for March 1976.

3. Work order was delayed for lack of a tank. The tank was ordered by the BCE on 25 June 1975. Base supply requisitioned the item on 25 July 1975. Status from the CONUS supply source indicates the tank is delayed as of 1 November. Work is scheduled to begin in December 1975, but the anticipated nonreceipt of this item will cause rescheduling the work for a later date.

4. Work order was delayed for lack of a boiler. The boiler was ordered by the BCE and requisitioned and received by base supply. The item received was the wrong boiler. The correct boiler had not been reordered by base supply as of 27 October 1975. The boiler is intended as a replacement for a badly deteriorated boiler.

5. Work order was delayed for lack of tile originally ordered by the BCE on 19 December 1974. Base supply requisitioned the tile on 10 October 1975. The status as of 27 October 1975 was that a followup has been sent to the supply source. The work order has been rescheduled three times.

6. Work order was delayed for lack of heat coil ordered by the BCE 10 February 1975. Base supply ordered the coil on 28 April 1975, and received status that the item was being procured for direct delivery from the contractor with shipment action delayed. The work order was scheduled for work in August 1975, rescheduled to September 1975 and then to May 1976.

7. Work order was delayed for lack of a 12 gauge channel. There was no indication that this item had been ordered by the BCE from base supply, or by base supply from the supply source. Work was scheduled for August 1975, rescheduled to February 1976, and then to April 1976.

8. Work order was delayed for lack of a boiler ordered by BCE on 24 September 1974, but not ordered by base supply. Work scheduled for January 1976, but will have to be rescheduled because of lack of boiler.

9. Work order was delayed for lack of electric door openers. No records exist showing item had been ordered by BCE or base supply. Work was originally scheduled to start in August 1975, but has been rescheduled to January 1976. Work will have to be rescheduled again due to lack of door openers.

## CHAPTER XVI

## ANDERSEN AIR FORCE BASE, GUAM

### A. MANAGEMENT DATA

1. Overall Organization. Andersen Air Force Base houses the 43rd Strategic Wing (SW) of the Strategic Air Command. The organization of the 43rd SW is shown in Figure XVI-1. The facilities engineering function is assigned to the Combat Support Group (CSG), while supply and procurement support to the Base Civil Engineer (BCE) is furnished by organizations under the Wing Deputy Commander for Resources.

2. Base Civil Engineer Organization. The BCE at Andersen Air Force Base is responsible for maintaining, operating, constructing, and acquiring real property facilities, and for providing related management, engineering, and other services to support the base. The organization at Andersen Air Force Base for the accomplishment of these functions is shown in Figure XVI-2.

3. Base Supply. The Chief of Supply is responsible for providing supply support for all organizations located on Andersen Air Force Base, or attached to Andersen Air Force Base for logistical support. The standard organizational chart for the Chief of Supply is shown in Figure XV-3, in Chapter XV. Supply for the BCE is managed by the Materiel Control Division (MCD), and is organized as shown below:

**MATERIEL CONTROL**

Inventory Management Supervisor
Master Sergeant

| | |
|---|---|
| 1--Inventory Management Supervisor (Staff Sergeant) | 1--Warehouse Specialist (Staff Sergeant) |
| 1--Inventory Management Specialist (Sergeant) | 1--Warehouse Specialist (Sergeant) |
| 1--Inventory Management Specialist (GS-04 civilian) | 1--Warehouse Trainee (A 1st Class) |
| 1--Inventory Management Apprentice (GS-03 civilian) | 1--Warehouse Trainee (WB-01 civilian) |
| 1--Inventory Management Apprentice (WG-05 civilian) | |

Total military assigned-- 6
Total civilian assigned-- 4
TOTAL 10

**ANDERSEN AFB**
**ORGANIZATION**

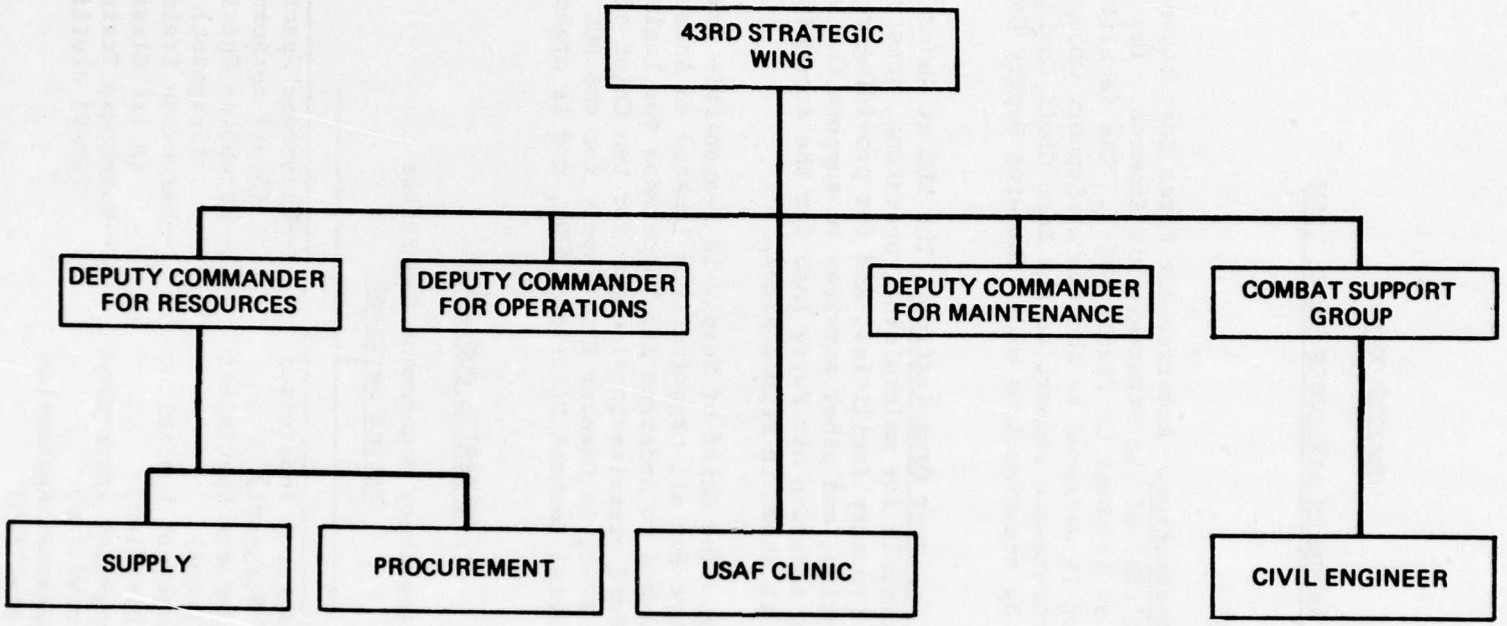



Figure XVI-1

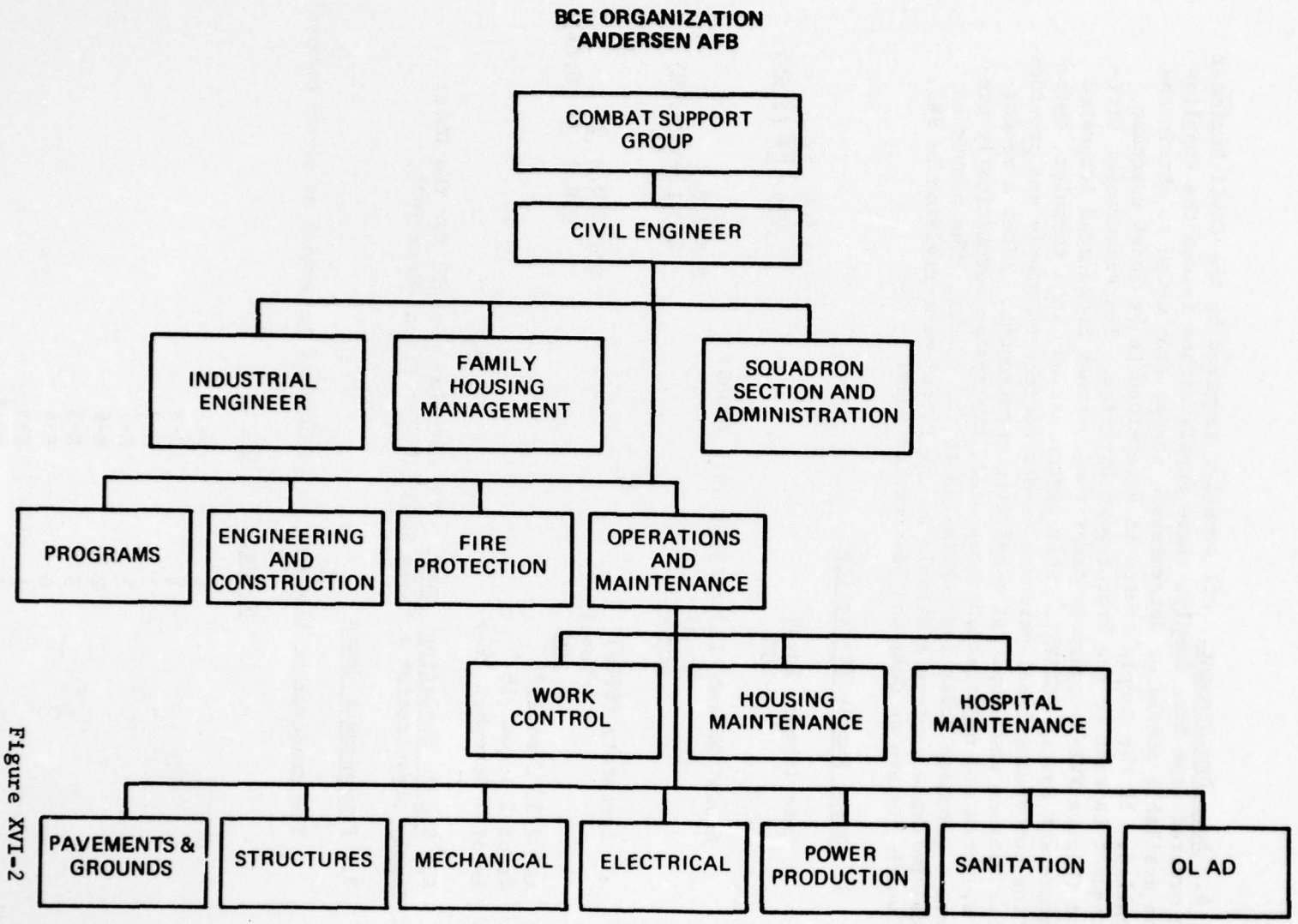

BCE ORGANIZATION
ANDERSEN AFB
COMBAT SUPPORT GROUP
CIVIL ENGINEER
INDUSTRIAL ENGINEER
FAMILY HOUSING MANAGEMENT
SQUADRON SECTION AND ADMINISTRATION
PROGRAMS
ENGINEERING AND CONSTRUCTION
FIRE PROTECTION
OPERATIONS AND MAINTENANCE
WORK CONTROL
HOUSING MAINTENANCE
HOSPITAL MAINTENANCE
PAVEMENTS & GROUNDS
STRUCTURES
MECHANICAL
ELECTRICAL
POWER PRODUCTION
SANITATION
OL AD

Figure XVI-2

4. Base Procurement. All supplies required by the Civil Engineer are ordered from Base Supply. Base Supply either issues the supplies from available stocks or determines a source from which to obtain the supplies. If the supply source is determined to be local purchase, a request is sent to the Procurement Division. The Procurement Division (Figure XVI-3) operates under the Customer Integrated Automated Procurement System (CIAPS). This system stores, in a computer, information concerning local purchase vendor sources of supply and provides these sources upon input of a specific requirement. After a vendor is selected and negotiations completed, the system automatically produces a purchase order for submission to the vendor. The number of local purchase sources available to the Procurement Division is 983, of which 219 are on Guam and 764 outside Guam.

5. Basic Supply Statistics

| | | |
|---|---|---|
| Line Items: | Total | 48,942 1/ |
| | BCE | 1,079 2/ (2.2%) |
| Annual Demand, Fiscal Year 1975 ($000) | | |
| | Total | $ 8,288.2 |
| | BCE | 2,041.6 (24.6%) |
| Inventory ($000) | | |
| | Total | $17,870.7 1/ |
| | BCE | 138.9 3/ (0.8%) |

1/ As of 30 June 1975
2/ As of 2 August 1975
3/ As of 4 November 1975

6. Supply Operating Costs. The civilian payroll for the Chief of Supply organization totaled $403,600 for Fiscal Year 1975.

7. Procurement Costs

The Procurement Division is authorized personnel as shown below:

| Number | Grade |
|---|---|
| 1 | 0-4 |
| 1 | 0-3 |
| 1 | E-9 |
| 2 | E-7 |
| 2 | E-6 |
| 5 | E-5 |
| 6 | E-4 |
| 1 | E-3 |
| 1 | GS-4 |
| 1 | GS-3 |

ANDERSEN AIR FORCE BASE
PROCUREMENT DIVISION
DEPUTY COMMANDER
RESOURCES
CHIEF
PROCUREMENT DIVISION
DEPUTY CHIEF
PROCUREMENT DIVISION
CHIEF
SERVICE BRANCH
CHIEF
CONTRACT MAINTENANCE
BRANCH
CHIEF
SUPPLIES PROCUREMENT
BRANCH
CHIEF
OPERATIONS
BRANCH

Figure XVI-3

Two personnel, grade E-4, are dedicated to making purchases for the Civil Engineer. Personnel costs for making Civil Engineer purchases are:

| | |
|---|---|
| 485 | monthly pay |
| X 2 | personnel |
| 970 | monthly pay-2 personnel |
| X 12 | months |
| $11,642 | annual personnel cost |

B. BASE CIVIL ENGINEER DATA

1. Functions and Operations

a. Types of Work. Work accomplished by the BCE falls into the classes described below:

(1) Operations and Service Work. This work involves the labor effort of operating the utility systems and accomplishing work such as snow removal, trash pick-up, grass cutting, and entomology service. Service calls are frequently of an emergency nature and require immediate attention.

(2) Recurring Maintenance. This work is pre-identified and is performed at specific repetitive intervals of once a year or more often depending upon the facility or equipment involved. Work is accomplished on a cyclic basis such as checking air-conditioning or heating systems.

(3) Direct Scheduled Work. This work can be consolidated, estimated and scheduled; it is frequently urgent but not considered emergency. The urgent work is called Fast Action Service Technique (FAST) and is to be accomplished within five days. The less urgent work is consolidated as Hopper Technique jobs and is to be completed within 30 days. Building custodians also request building maintenance on AF Form 1135 (Real Property Maintenance Request).

(4) In-Service Work (IWP) Job Orders. This work is of a routine type not suitable for inclusion as direct scheduled work. IWP work is frequently grouped with other work requirements that pertain to maintenance and minor construction jobs.

(5) IWP Work Orders. This work requires extensive planning and generally materiel must be ordered and the personnel effort is likely to involve two or more trade centers (shops). The

work is formally documented on AF Form 327 (Base Civil Engineer Work Order). Work covers maintenance and repair and minor construction that is beyond the scope of a job order.

b. Work Generation. Outline of work generation is shown on the attached chart (Figure XVI-4). Work generates as described below:

(1) Verbal Request. Telephone call is made to the service desk for emergency or urgent work. Emergency work is that work which requires immediate attention and response is to be made within 24 hours. Verbal requests are recorded on AF Form 1879 (Service Call/Job Order Record). The request is reviewed and based upon decision as to its nature is processed as an emergency, FAST (5-day response), HOPPER (30-day response), Do-It-Now (DIN), or it can become part of a larger job and included in a work order.

(2) Submission of Work Request. Organizations outside of the BCE submit AF Form 332 (Work Request) requesting specific types of work, minor construction or self-help work. A work request can become a work order when the work is of the appropriate magnitude and is approved accordingly. AF Form 327 (Work Order) can generate from AF Form 332 when the work is beyond the scope of a job order.

(3) BCE Facilities Surveys and Inspections

Job orders and work orders can generate from in-house surveys and inspections.

A job order is a small job usually performed by a single shop usually requiring materiel only from bench stock. Materiel and supplies for a job order are acquired as follows:

AF Form 1445 (Materials and Equipment List) is prepared and routed to Materiel Control. A check is made to determine if items are available.

Items not available are requisitioned from supply and are placed in the holding area when received.

Materiel and supplies are held in the holding area until items for the job order are complete. The authorized mechanic signs the release form for the items when they are required to start the work as scheduled.

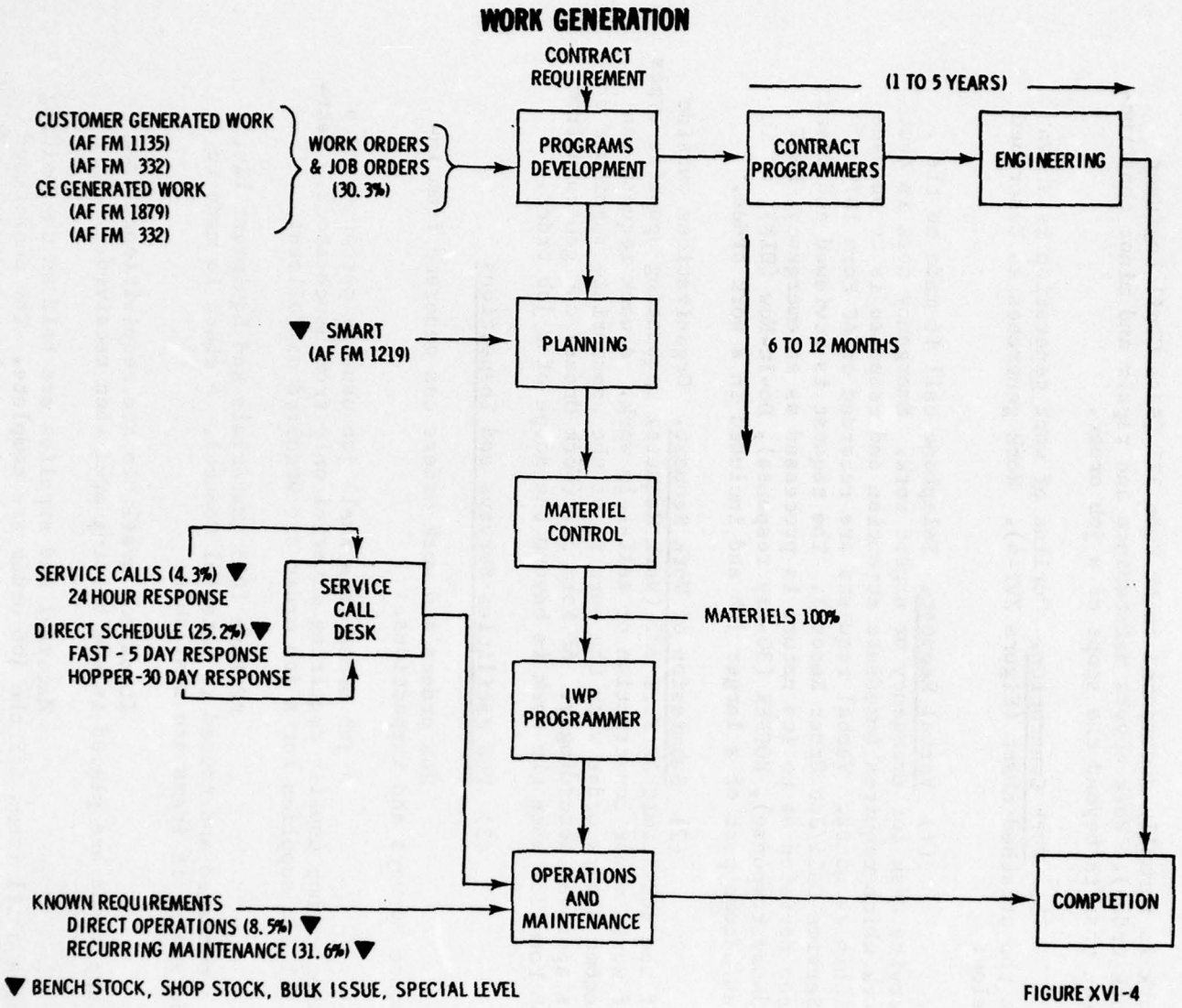



FIGURE XVI-4



Figure XVI-4

Work orders apply to work that requires the effort of more than one shop and use materiel and supplies that must be ordered or requisitioned on an individual basis. Materiel and supplies for a work order are acquired as follows:

Work order is entered into the Base Engineer Automated Management System (BEAMS) and forwarded for review and make-up of AF Form 1445 listing materiel and supplies required.

Work order is routed to Materiel Control through Work Authorization Section for ordering of materiel and supplies.

Bench stock is checked but stocks are not withdrawn until required. Stocks in the residual area are withdrawn and placed in the holding area. Stock that is not available must be requisitioned through the 1050-II computer located in supply.

Two folders are prepared for the work order with one folder retained by Materiel Control and the other in the Holding Area.

The receipt of materiel and supplies is carefully monitored with small items being retained in one location and large bulky items in another. The Due Out Status List (DO-3 Report) is checked for status of incoming items and follow-ups made when necessary.

The work order file is returned to the Work Authorization Section when materiel and supplies are available. The work order is subsequently routed to the IWP section for inclusion in the work schedule for a future month.

The work order is again reviewed by planner and check is made of supplies and materiel and missing items, if any, are ordered. Upon completion of planners check work order is again returned to scheduler and finally to the shops for accomplishment.

The respective shop foreman reviews the package of materiel and supplies for availability and when all is in order the work is scheduled to begin.

Upon completion of the work order leftover materiel are placed in the BCE residual area. AF Form 1469, (Materials Cost Transfer for BEAMS) is used to transfer the excess items from the work order to the residual area. The Work Authorization

Section and/or Work Control Section are advised when all leftover materiels are placed in the residual area.

c. Scheduling. Work accomplishment depends upon a blend of man-hours and materiels that must be precisely timed and planned. Figure XVI-5 provides the time frames allotted to work accomplishment. Work is initially programmed on a 12-month basis but is put into practice by use of the IWP which is prepared on AF Form 919 (In Service Work Plan) and on a series of visual charts which reflect the status of IWP work for the current month and six future months. The IWP provides a means whereby man-hours for job orders/work orders are determined after requirements for operations and service work, recurring maintenance and direct scheduled work are known. A work order entering the IWP flows as follows:

6th Future Month--Planning complete.

5th Future Month--Funds available.

4th Future Month--Materiel must be ordered.

3rd Future Month--Materiel on order.

2nd Future Month--Materiel must be 100% by end of next month.

1st Future Month--Materiel must be 100% by end of current month.

Current Month--Work scheduled during weekly review should be in progress.

d. Rescheduling. A change in materiel requirements, availability of man-hours or materiels and job priority are reasons why work must be rescheduled. Customer dissatisfaction is frequently a result of work rescheduling. There are many occasions where loss of productivity and supply dollars occur due to materiels not being available to properly repair items. In some cases, the long range is total replacement of an item when proper repair work would have extended the life of the item. The actual losses due to lack of materiels support cannot be documented.

e. Statistics. Table XVI-1 and Figure XVI-6 depict distribution of man-hours for Fiscal Year 1975.

WORK ACCOMPLISHMENT TIME FRAMES (NOT LATER THAN)
(TYPICAL)

| Avenue of Effort | SERVICE CALL | DIRECT | SCHEDULED WORK | IWP WORK |
|---|---|---|---|---|
| | | FAST | HOPPER | |
| Authorization Document | SERVICE CALL | JOB ORDER | JOB ORDER | WORK ORDER OR JOB ORDERS |
| Type of Requirement | Repair (Emergency) | All MFH and Base Urgent Minor M&R | Routine Base and MFH Minor M&R | Routine Major & Minor M&R and Minor Construction |
| Accomplished by | DIN* SHOP | Team, Shop or DIN (when DIN NOT fully employed | SMART (If in the facility) SHOP | SHOP |
| | ←48 hours→ | 3 Day Delay Until Assign | | |
| | ←5 DAYS→ | | | |
| | ←1 MONTH→ | | | |
| | ←2 to 6 MONTHS→ | | | |

*Do It Now Truck

Figure XVI-5

# DISTRIBUTION OF WORK EFFORT FY 75

## ANDERSEN AFB

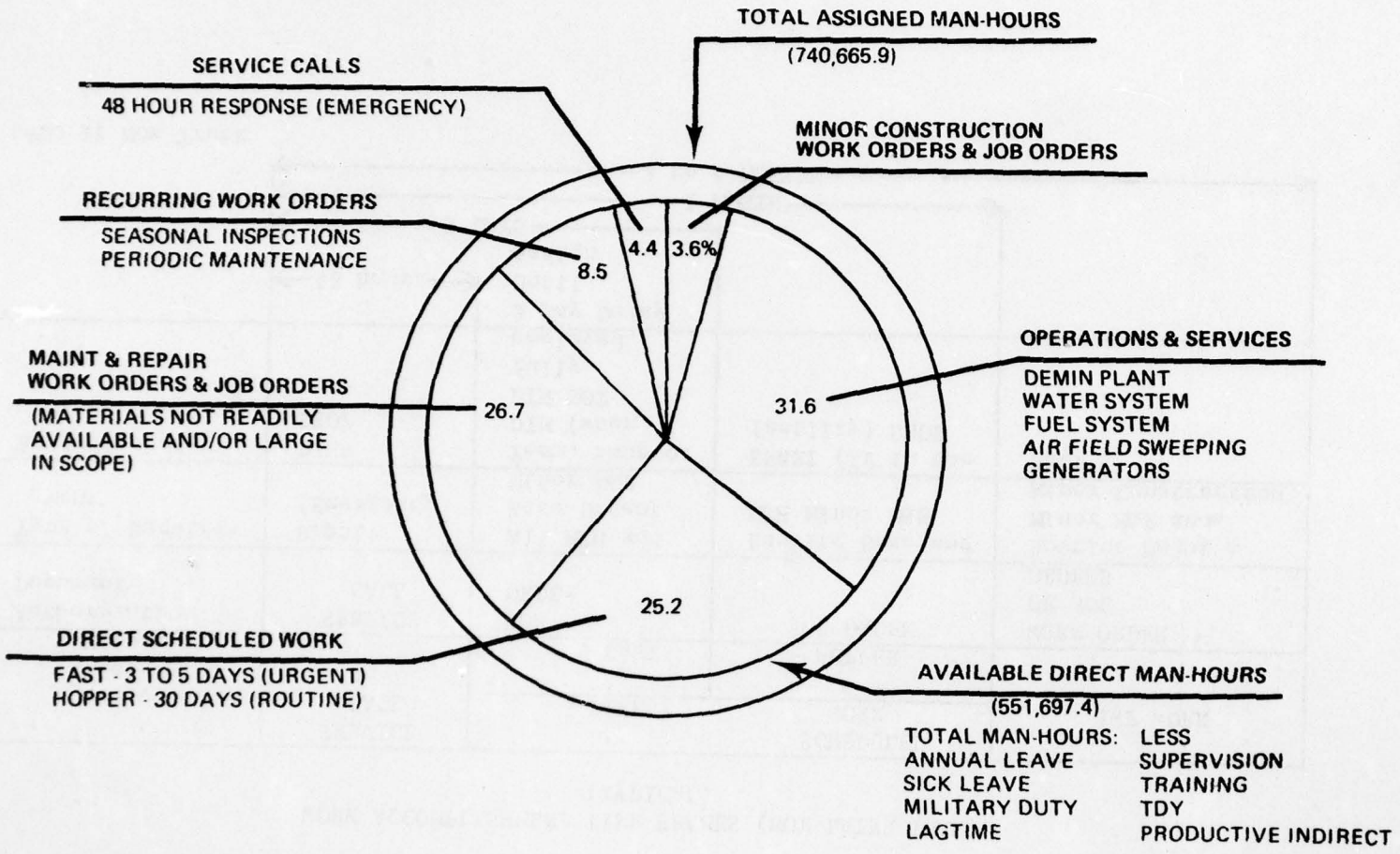
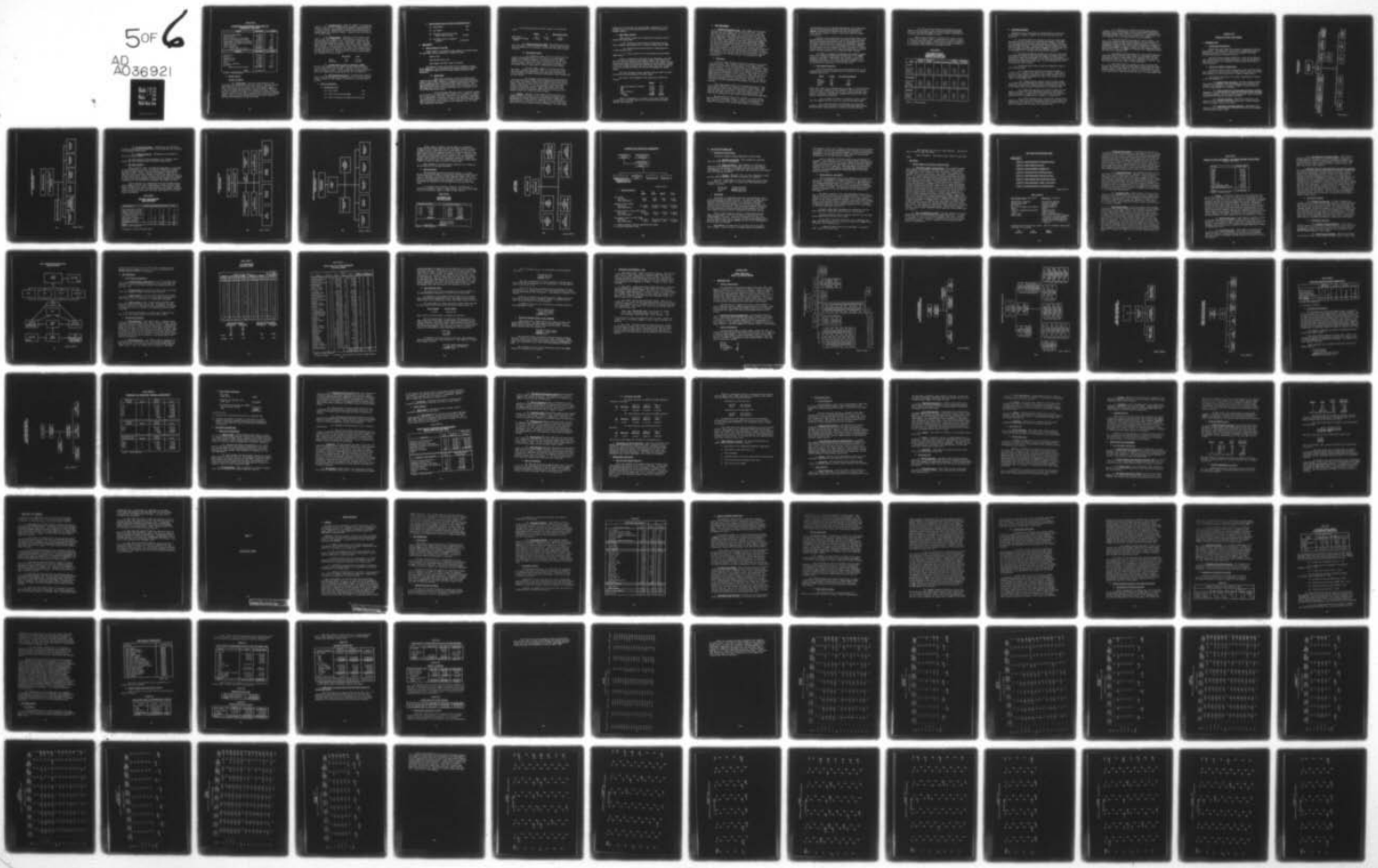



Figure XVI-6

AD-A036 921 DEFENSE SUPPLY AGENCY ALEXANDRIA VA F/G 15/5
MATERIEL SUPPORT TO CIVIL ENGINEER OPERATIONS. VOLUME II. FIELD--ETC(U)
SEP 76

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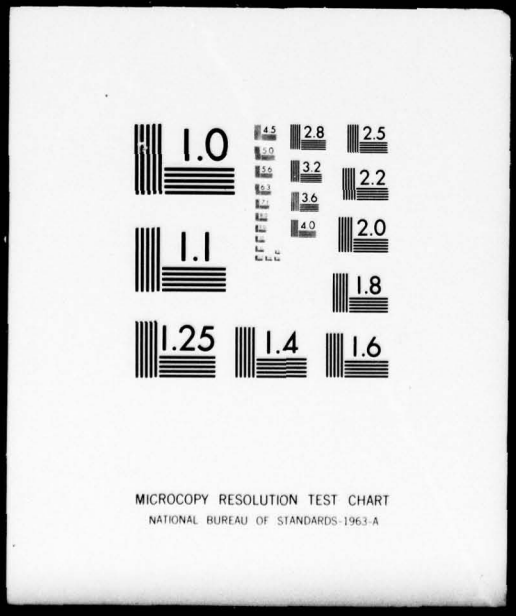


Table XVI-1

DISTRIBUTION OF WORK EFFORT FISCAL YEAR 1975
ANDERSEN AIR FORCE BASE

| DIRECT | MAN-HOURS | % of DIRECT |
|---|---|---|
| Recurring Maintenance | 46,856.3 | 8.5 |
| Service Calls | 23,961.7 | 4.4 |
| Minor Construction Job Orders | 1,244.3 | .2 |
| Minor Construction Work Orders | 18,892.0 | 3.4 |
| Maintenance and Repair Job Orders | 84,210.5 | 15.3 |
| Maintenance and Repair Work Orders | 63,151.5 | 11.4 |
| Direct Schedule | 139,269.7 | 25.2 |
| Direct Operations | 174,111.4 | 31.6 |
| Direct Man-hour Total | 551,697.4 | 100.0 |
| **INDIRECT** | **MAN-HOURS** | **% of TOTAL** |
| Supervision | 38,905.0 | 5.3 |
| Training | 15,518.7 | 2.1 |
| Temporary Duty | 3,082.5 | .4 |
| Military Duty | 18,492.9 | 2.5 |
| Leave | 81,114.7 | 11.0 |
| Productive Indirect | 31,106.6 | 4.2 |
| Lag Time | 748.1 | .1 |
| Indirect Man-hour Total | 188,968.5 | 25.6 |
| TOTAL | 740,665.9 | |

Source: Field Research

2. Supply Support

Sources of Supply

(1) Bench Stock. Stocks of items located in the individual work centers are called bench stocks. The bench stocks exist primarily for service calls, job orders and work orders. Bench stock levels are determined by the installation computer on a quarterly period based upon three demands in 90 days. When an item has no demands in 90 days it is reviewed for possible deletion. Deletion action is taken when no demands occur in the second 90-day period. Bench stocks are BCE owned inventory having a value of $196,082 and consisting of 2,000 line items.

(2) Special Levels. Items for standby or contingency support, e.g., motors for refrigeration equipment, transformers for electrical systems, and sandbags are retained in supply inventory as special levels. Special level items are used for emergency or backup support for utilities systems. Special levels are retained for 150 line items.

(3) Residual Area. Materiels left over from a work order or job order completion or cancellation are placed in the residual area for possible use at a future date. Items held are air-conditioning components, pumps, lavatories, elbows, fittings, paint, concrete blocks and numerous other items of Civil Engineer (CE) materiels. Items are returned to base supply after being held for six months if no foreseeable need exists. The residual area contains 450 line items having an estimated value of $25,000 which are CE owned inventory. Fiscal Year 1975 turn-ins to Base Supply were estimated to be as follows:

| | Line Items | Cost |
|---|---|---|
| Credit | 250 | $34,500 |
| Noncredit | 100 | $13,560 |

(4) Holding Area for Bills of Materials (BOMs). Materiel and supplies for job orders and work orders are placed in the holding area until the BOM is completed and the workmen sign the release document. Total average cost of materiels stored within the holding area during Fiscal Year 1975 was $491,271.

(5) Base Self-Service Store. The BCE obtains administrative and certain janitorial supplies from the base self-service store. Estimate is that supplies consumed have an annual value of $15,000.

3. Bills of Materials

a. Fiscal Year 1975

(1) Work orders 483

(2) Work orders requiring BOMs 230

(3) Value of Supplies and Materiels $2,355,440

b. Backlog Fiscal Year 1976 (as of 31 October 1975)

| | | |
|---|---|---|
| (1) | Work Orders | 390 |
| (2) | Job Orders | 600 |
| (3) | Estimated man-hours for work orders and job orders | 128,500 |
| (4) | Estimated value of supplies required | $1,214,813 |

C. BASE SUPPLY

1. Supply Support to the BCE

Supply support is provided by base supply to the BCE through the same three sources identified at Kadena Air Base:

Bench stock;

Base Service Store; and

Base supply--by direct draw of materiel.

The balance of this description will be limited to points which supplement, or are different from, those presented in Chapter XV for Kadena Air Base, and to relevant Andersen Air Force Base statistics.

(1) Bench Stock

There were originally a total of 20 bench stock locations within BCE. However, in accordance with recent Air Force policy, seven of these which were somewhat contiguously located have been consolidated into a centralized bench stock location. This centralized bench stock location contains 1,224 items (61.3% of the BCE bench stock total), with an authorized level of $88,200 (47.7% of the BCE bench stock total).

The centralized BCE bench stock is currently operated by one person on a full-time basis; however, it is planned to expand this to two people, full-time. Currently, this location is operated by a craftsman who is detailed from one of the BCE shops; this individual rotates about every 30 days. Other bench stock locations within BCE are operated by the personnel of the supported shop, on a part-time, additional duty basis.

The following overall statistics apply to the BCE bench stock:

| | Amount | % | Base Supply Total |
|---|---|---|---|
| Line Items | 1,996 | 64.6% | 3,089 |
| Authorized Stockage ($000) | $ 184.9 | 5.7% | $3,227.4 |

(2) Base Service Store (BSS). The Andersen Air Force Base BSS carries a total of 528 line items, with an inventory value as of 6 November 1975 of $158,300. Fiscal Year 1975 sales totaled $400,200.

(3) Base Supply Stocks

As at Kadena Air Base, there is a remote terminal located in BCE which provides direct input to the base supply computer for obtaining materiel. Requirements from the BCE are submitted on a "fill or kill" basis, if the item is not in stock (or not carried), BCE must validate their need and resubmit the requirement before a back order is established by base supply.

The base supply computer in on-line during the main shift. During other shifts, there is a duty section within the base supply which physically checks the stock locations and issues materiel to support emergency requirements; these transactions are post-posted.

For emergency requirements with an unsatisfactory estimated delivery date (EDD) from the supplying Inventory Control Point (ICP), the BCE can request base supply to take local purchase action. Approval of this can only be given by the base supply officer or his deputy. It was estimated that about three such actions per month were taken to support BCE, while total local purchase of Central Procurement (CP) items for the base was estimated at about two to three actions per week.

2. Funding. Materiel in base supply stocks (including such supply sources as the BSS) is in the Air Force stock fund, and is purchased with customer Operations and Maintenance (O&M) funds. Replenishment of these stocks is dependent on the availability of stock fund money. However, when base supply is out of stock fund money but has a firm, funded customer requirement, they may request

permission from Strategic Air Command (SAC) headquarters to over-obligate their stock fund buying authority to meet the specific customer demand.

3. Base Supply Sources

Three primary sources were identified for materiel used at Andersen Air Force Base:

(1) Inventory control points in Continental United States (CONUS), particularly those of Defense Supply Agency (DSA);

(2) General Services Administration (GSA) Region #9, in San Francisco; and,

(3) Local purchase via the Purchasing and Contracting (P&C) Office.

Sources of supply are identified in the Management List (ML) for all items with National Stock Numbers (NSNs), and requisitions for these items are automatically produced by the base supply computer. Items without NSNs will be procured through the local purchase program if they are "common hardware" type items; those which have an application to an end item are routed to the end item manager for supply action.

All local purchase actions required routing to P&C--no ordering authority has been placed with base supply.

By source, items managed by base supply are obtained as follows:

| | Number | % |
|---|---|---|
| AFLC (Air Logistics Centers) | 12,067 | 24.6% |
| GSA | 4,205 | 8.6 |
| DSA | 22,299 | 45.6 |
| Local Purchase | 5,532 | 11.3 |
| Other | 4,839 | 9.9 |
| TOTAL | 48,942 | 100.0% |

Based on examination of a sample of the items identified as used only by the BCE, about 22% of the BCE items are obtained through local purchase.

## D. BASE PROCUREMENT

1. Purchase Instruments Used. Under CIAPS, the most widely used purchase instrument is the Purchase Order (PO). Blanket Purchase Agreements (BPAs) are not used because individual BPA calls may be lost under CIAPS. As a result, BPAs are used only where organizations are decentralized (do their own buying) such as the Commissary. Purchases up to $10,000 may be made using POs as prescribed in Armed Service Procurement Regulations (ASPRs). In view of the large number of local procurements made in CONUS, the use of POs is preferred because they provide formal documents for specific purchases. For purchases over $10,000, delivery orders may be used for contracts which have already been established such as GSA Schedules and Buy United States Here (BUSH) contracts. Additionally, contracts up to $50,000 may be written by the Procurement Division. For contracts over $50,000 and $100,000, approval is required from the 3rd Air Division, and Headquarters, SAC, respectively.

2. Procedures

The Procurement Division receives all requests for purchase from Base Supply. These requests contain a base supply document number and are therefore not identifiable to the organization requiring the supplies. If the Procurement Division determines more information is required to make a purchase the request is returned to Base Supply where determination is made of the original requestor from whom additional information must be obtained. When this occurs, the CIAPS requires the request to be placed on a Purchase Request Open Item List until the additional information is received. If the additional information is not received within ten days, the request is cancelled and the organization must submit a new request for the supplies.

Since Base Supply requests the Procurement Division to make the purchase, funding of the purchase is made by Base Supply. Base Supply operating under stock fund procedures, assigns a stock fund code which pays for the purchase. When Base Supply receives the supplies and issues them to the requisitioning organization, the organization reimburses the Base Supply stock fund with its O&M funds.

The processing of requests for purchase in the Procurement Division varies according to Urgency of Need. In emergencies, and when supplies can be bought on Guam, procurement may telephone a request to the vendor, or it may be hand-carried to the vendor by

a representative of the requiring organization. For requirements that are Uniform Materiel Movement and Issue Priority System (UMMIPS) priorities 02 through 08 that are not available on Guam, telex or telephone contact is made with vendors in Hawaii or California.

Because of the restrictions on buying brought about by the Buy American Act, and because many supply items sold on the Guam market are foreign made products, most of the purchasing by the Procurement Division is done in Hawaii and California. Estimates are that as much as 25% of the requirements purchased in Hawaii and California could be satisfied on Guam if the rules for buying foreign products were the same as the rules applicable to American bases in foreign countries, e.g., Kadena Air Base, Okinawa.

The CIAPS is designed to consolidate low priority requirements with a computer program which automatically holds UMMIPS priority 09 through 15 requirements for ten days or up to $500 whichever comes first. This allows like items requested to be accumulated and entered on a single purchase instrument instead of using multiple instruments to buy the same item.

3. Procurement Statistics

The two procurement personnel making purchases for the CE indicated they did the following volume of business in the months indicated during 1975:

| Month | Awards | Line Items Purchased |
|---|---|---|
| August | 150 | 453 |
| September | 181 | 357 |
| October | 160 | 344 |
| Total | 491 | 1,154 |

These three month totals indicate that an average of 1,964 awards and 4,616 line item purchases are made annually. The totals also indicate that there is an average of 2.35 line items per purchase transaction. A listing of 409 purchase requests which had not yet been awarded reflected the following:

(1) It takes an average of 2.58 days to load a request into the computer from the time it is received from Base Supply.

(2) As of the date of the listing, 66 (of the 409) purchase requests listed had been on order from Base Supply between 30 and 60 days. Three had been on order for more than 60 days.

(3) There were 96 requisitions submitted from Base Supply for 42 line items. Many of these duplicate requisitions will be consolidated by CIAPS into single purchase instruments as described under the Procedures section.

Administrative leadtime is defined as the amount of time, in days, that it takes to make an award from the time the request is received from Base Supply. Administrative leadtime, expressed as an average number of days for each type purchase instrument, is as indicated in Table XVI-2 for the months in 1975.

Table XVI-2

PROCUREMENT DIVISION
ADMINISTRATIVE LEADTIME
ANDERSEN AIR FORCE BASE

| TYPE | PURCHASE ORDER | DELIVERY ORDER | CONTRACT | AVERAGE | NUMBER OF ITEMS | PERCENTAGE OF ITEMS |
|---|---|---|---|---|---|---|
| AUGUST | | | | | | |
| Priority | 17.9 | 16.1 | 0 | 17.7 | 327 | 41.6 |
| Other | 21.7 | 20.2 | 0 | 21.3 | 459 | 58.4 |
| Average | 19.9 | 19.2 | 0 | 19.8 | --- | ---- |
| SEPTEMBER | | | | | | |
| Priority | 14.3 | 11.1 | 0 | 13.6 | 257 | 34.4 |
| Other | 22.8 | 14.7 | 0 | 19.9 | 491 | 65.6 |
| Average | 19.6 | 13.8 | 0 | 17.7 | --- | ---- |
| OCTOBER | | | | | | |
| Priority | 7.1 | 6.6 | 0 | 7.1 | 214 | 45.7 |
| Other | 16.9 | 6.7 | 0 | 15.6 | 254 | 54.3 |
| Average | 12.4 | 6.6 | 0 | 11.7 | --- | ---- |

Source: Field Research

E. INDIVIDUAL RESEARCH

Completion of six work orders was delayed because of the lack of ten items of supply. Research of the ten items revealed the following:

a. Work Order A01744 was delayed for lack of a Valve Seat. The Valve Seat was ordered by the BCE from Base Supply on 13 March 1975 and subsequently ordered by Base Supply on 19 March 1975 from the Procurement Division. The Procurement Division ordered the Valve Seat on 16 May 1975 from a contractor who said he delivered the item to the Military Ocean Terminal Bay Area (MOTBA) on 10 June 1975. As of 11 November 1975, the Valve Seat had not been received.

b. Work Order A07288 was delayed for a lack of a Tee Flange. The Flange was ordered by BCE from Base Supply on 14 March 1975 and subsequently ordered by Base Supply on 19 March 1975 from Defense Construction Supply Center (DCSC). Status received from DCSC indicated the Flange was shipped 8 October 1975. As of 11 November 1975, the Flange had not been received.

c. Work Order A11023 (five items) was delayed for lack of the following items.

(1) A Band Brace (100 each) was ordered by BCE on 14 March 1975. Ninty-two each Braces were received. Eight Braces are still required which, according to Base Supply records, are on order on a Base Supply requisition and were to be shipped from the vendor on 13 November 1975.

(2) A Hinge Gate was ordered by BCE from Base Supply on 14 March 1975 and subsequently ordered from Procurement by Base Supply on 7 October 1975. Available status indicated the Hinge was to be shipped from the vendor in California on 20 January 1976.

(3) Barbed Wire Extension was ordered by BCE from Base Supply on 14 March 1975 and subsequently ordered by Base Supply from Procurement on 7 August 1975. Available status indicated the Extension would be shipped from the vendor on 1 January 1976.

(4) Corner, Extension Arm, was ordered by BCE from Base Supply on 14 March 1975 and subsequently ordered by Base Supply from Procurement on 7 October 1975. Available status indicated the Arm would be shipped from the vendor on 17 January 1976.

(5) Clamp Loop was ordered by BCE from Base Supply on 14 March 1975 and subsequently ordered by Base Supply from Defense Industrial Support Center (DISC) on 20 March 1975. Available status from DISC indicated item was being procured on 24 October 1975. As of 11 November 1975, the Clamp Loop had not been received.

d. Work Order A11093 was delayed for lack of Conduit. The Conduit was ordered by BCE from Base Supply on 27 March 1975 and subsequently ordered by Base Supply from Procurement on 27 March 1975. Procurement ordered the item from Contractor Operated Civil Engineer Supply Store (COCESS) contractor at March Air Force Base, California, who delivered item to the MOTBA on 27 October 1975. Expected delivery date was to be 3 January 1976.

e. Work Order A11110 was delayed for lack of Metal Expanded, which was ordered by BCE from Base Supply on 25 September 1974 and subsequently ordered by Base Supply on 26 September 1974 from GSA. Original order was for 75 each, 69 each of which were received. Six each remain on back order with no status available.

f. Work Order A11134 was delayed for lack of Cooling Unit. The unit was ordered by BCE from Base Supply 21 March 1975 and subsequently ordered by Base Supply on 7 May 1975 from Procurement. Procurement placed the order with the vendor on 14 July 1975. Available status indicated the expected delivery date was to be 18 November 1975.

# CHAPTER XVII

# MARINE CORPS BASE, CAMP LEJEUNE

## A. MANAGEMENT DATA

### 1. Installation Organization

Marine Corps Base (MCB) Camp Lejeune is organized as shown in Figure XVII-1. The mission of the base is to provide support to the 2nd Marine Division; the Force Troop of Fleet Marine Force (FMF) Atlantic and New River Helicopter Station.

MCB Camp Lejeune manning consists of a total of 234 officers, 2,407 enlisted, and 2,277 civilian personnel. Fleet Marine Forces at Camp Lejeune consist of an additional 1,146 officers and 18,069 enlisted personnel.

### 2. Facilities Engineer Organization

The MCB facilities engineer function is under the Base Maintenance Officer, who reports to the Assistant Chief of Staff, Facilities. The organization of Base Maintenance is shown in Figure XVII-2.

The principal functions of the major organizational elements of Base Maintenance are:

(1) Administrative Division. Civilian personnel management; budget preparation; cost and performance data collection and analysis; and, management of property assigned to Base Maintenance for the accomplishment of its mission.

(2) Natural Resources and Environmental Affairs Division. Management of natural resources located on the installation, including forestry management, fish and wildlife conservation, and environmental enhancement and pollution abatement activities.

(3) Utilities Division. Operation, maintenance, and repair of utility plants (steam generation, water, sewage treatment, and cold storage) located on the Base.

(4) Maintenance and Repair Division. Maintenance and repair of real property located on the Base, including the management and scheduling of such actions.

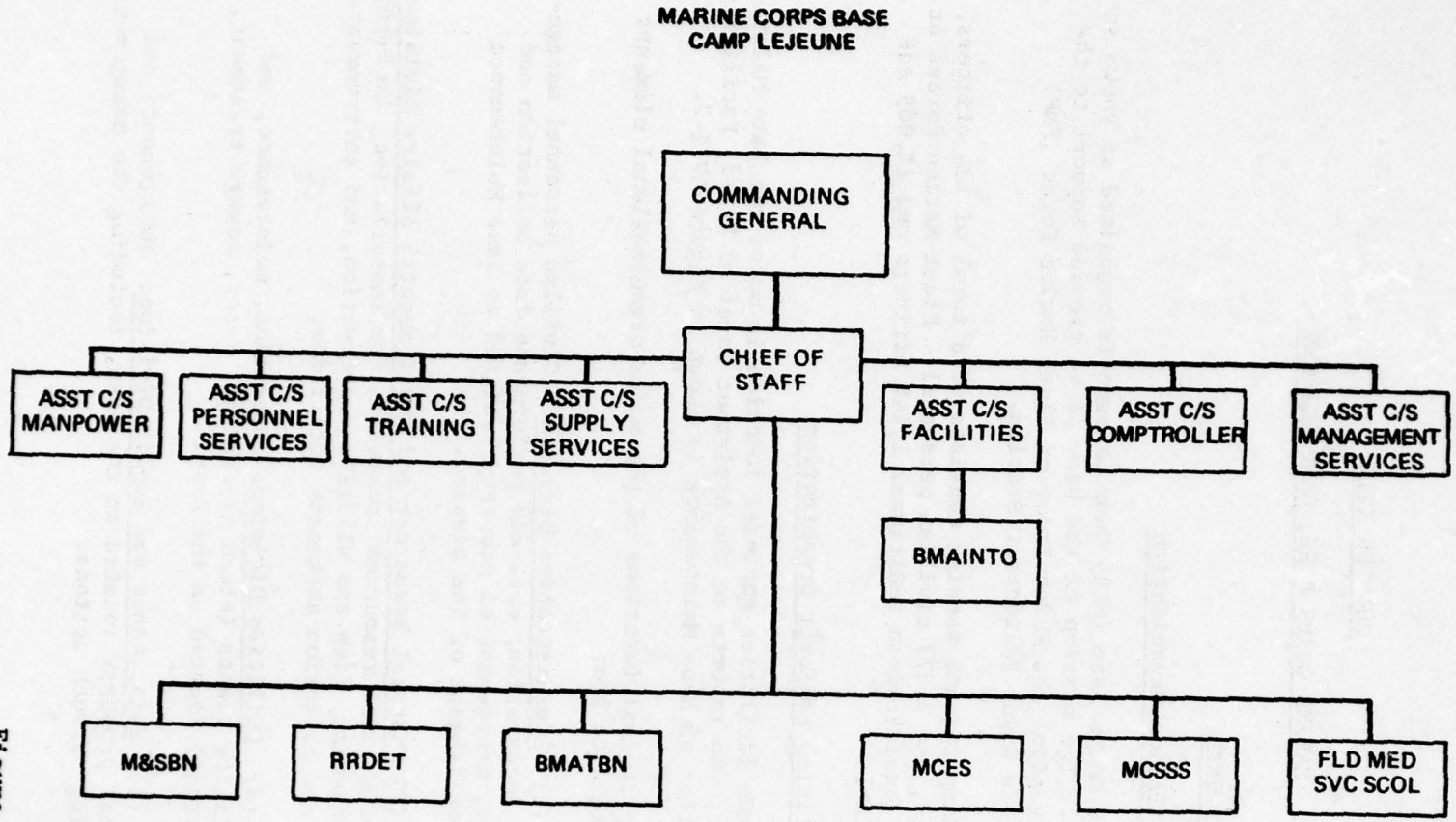



Figure XVII-1

**FACILITIES ENGINEER ORGANIZATION**
**MCB CAMP LEJEUNE**

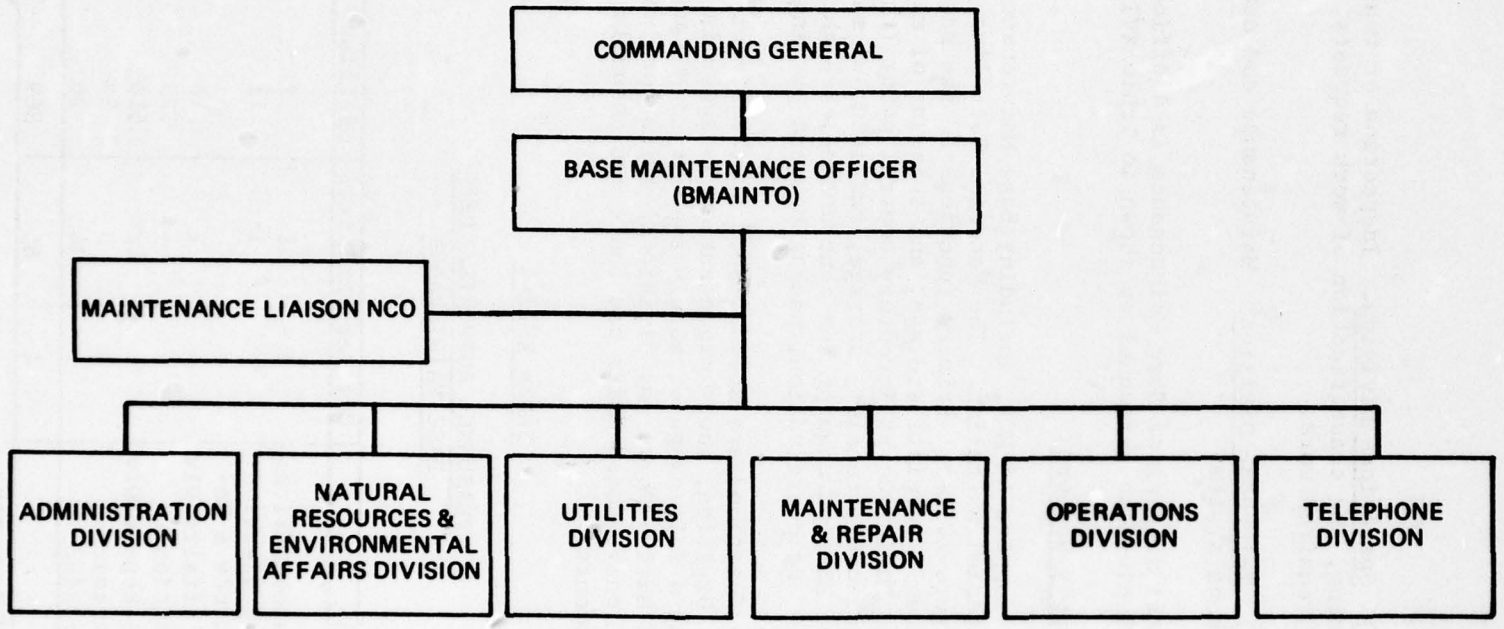



Figure XVII-2

(5) Operations Division. Inspection of real property; receipt, screening, and classification of work requests; and, planning and estimating required work.

(6) Telephone Division. Maintenance and operation of the Base telephone system.

The total manning of Base Maintenance is 4 officers, 65 enlisted, and 869 civilian personnel as shown in Table XVII-1.

3. MCB Supply Support

Supply support to MCB, including Base Maintenance, is provided by the Base Materiel Battalion. The Materiel Battalion is organized as shown in Figure XVII-3. Primary functions of the Base Materiel Battalion include: receipt, storage, and shipment of materiel as directed by the Marine Corps inventory control point (this function is now being phased out); receipt, storage, and issue of materiel required by units of the MCB; purchasing and contracting; freight and personnel transportation; and preservation, packaging, and packing services.

Supply functions are accomplished in the Direct Support Stock Control (DSSC) Division, whose organization is shown in Figure XVII-4. While providing a full range of supply support to MCB units, the DSSC supports Fleet Marine Force and Divisional units for lumber, compressed gases, and POL only; these units use their own channels for all other supply requirements.

Table XVII-1

PERSONNEL AUTHORIZATIONS
BASE MAINTENANCE

| Organization | Officer | Enlisted | Civilian | Total |
|---|---|---|---|---|
| Base Maintenance Office | 1 | 1 | 2 | 4 |
| Administrative Division | - | 1 | 11 | 12 |
| Natural Resources & Environmental Affairs Div | - | 2 | 16 | 18 |
| Utilities Division | - | - | 175 | 175 |
| Maintenance & Repair Div | 1 | 22* | 616 | 639 |
| Operations Division | 1 | 5 | 23 | 29 |
| Telephone Division | 1 | 34 | 26 | 61 |
| Total | 4 | 65 | 869 | 938 |

Source: Field Research

* Personnel on detail from FMF units.

**BASE MATERIEL BATTALION**
**MCB CP LEJEUNE**

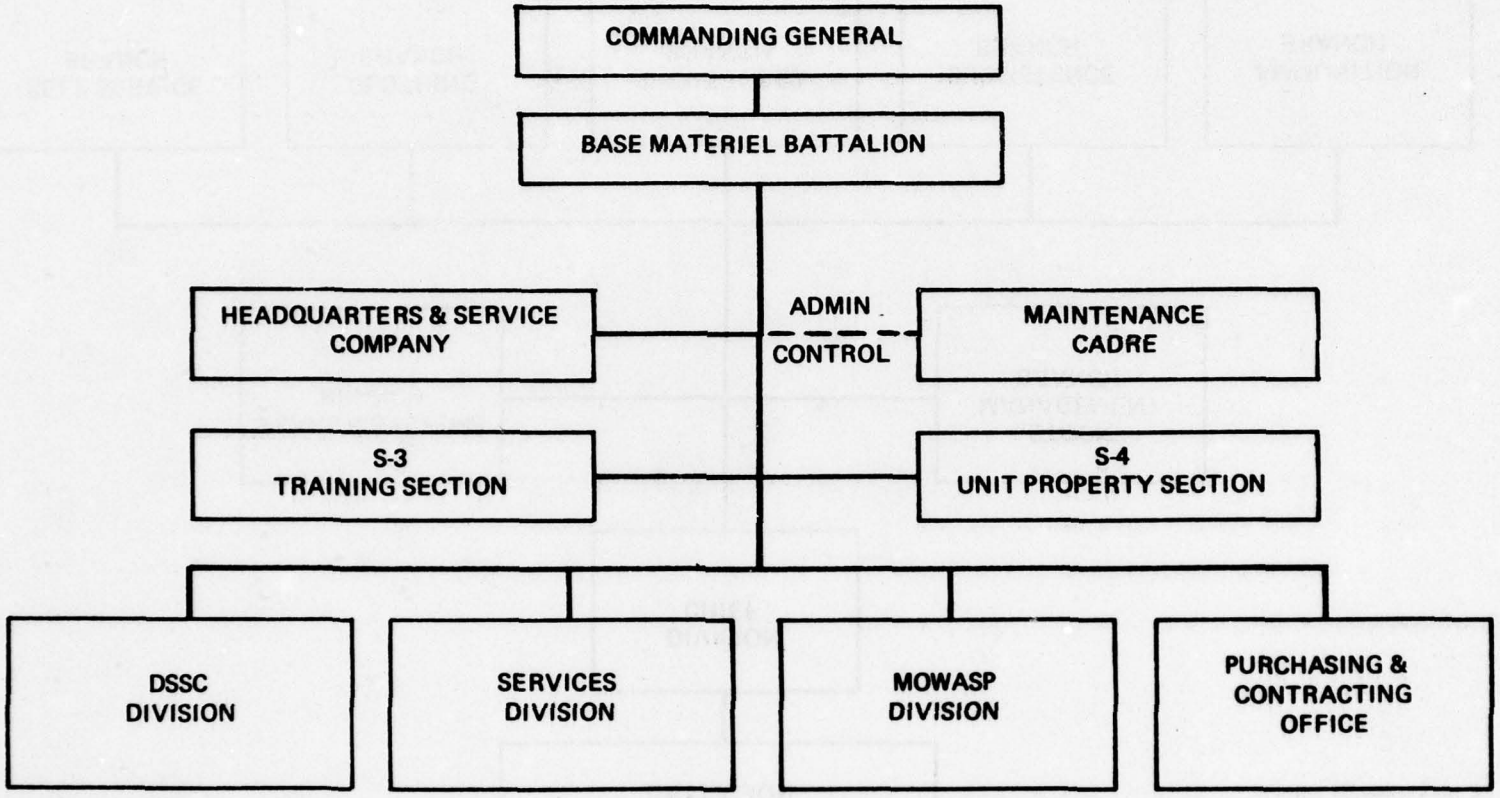



Figure XVII-3

**DSSC DIVISION ORGANIZATIONAL CHART**
**MCB CP LEJEUNE**

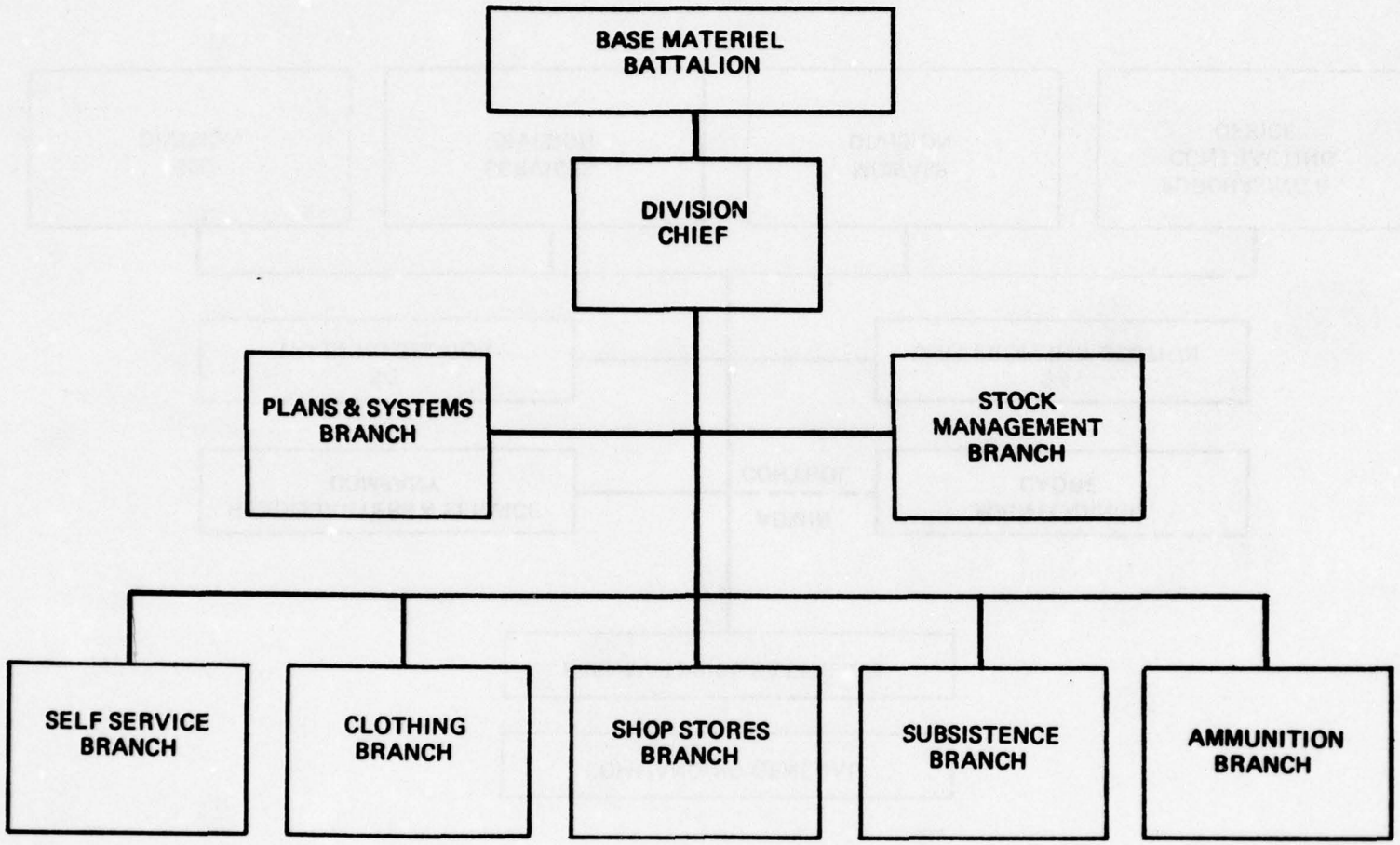



Figure XVII-4

Actual issues of materiel from the DSSC are accomplished through the Shop Stores, which operate from eight locations as shown in Figure XVII-5. Three shop stores (Issue Points 71, 73, and 74) support the facilities engineer function at locations which are somewhat separated from the Main MCB Camp Lejeune area. In addition, one Issue Point provides general supply support to the base maintenance function while another provides specialized support for carpentry, masonry, and plaster work. The remaining Issue Points provide supply support in areas not directly related to this study.

Total manning of the Base Materiel Battalion is 17 officers, 200 enlisted and 371 civilian personnel.

4. MCB Procurement

The Purchasing and Contracting (P&C) Office, of the Base Materiel Battalion performs all procurement functions for Camp Lejeune with one exception. A Blanket Purchase Agreement (BPA) clerk is assigned to the DSSC Division shop store which is operated for the benefit of the Base Maintenance (Civil Engineer) function. BPAs are established and monitored by the P&C Office for the shop store BPA clerk.

To accomplish the procurement function, the P&C Office is organized and manned as shown in Figure XVII-6. The total annual wages to provide procurement support is shown in Table XVII-2.

Table XVII-2

PROCUREMENT COST
MCB CAMP LEJEUNE

| Military Salaries | | | Civilian Salaries | | |
|---|---|---|---|---|---|
| 1 | 0-4 | $19,328 | 1 | GS-11 | $17,545 |
| 1 | E-8 | 11,394 | 3 | GS-09 | 43,659 |
| 1 | E-7 | 9,842 | 6 | GS-07 | 71,544 |
| 1 | E-6 | 8,582 | 7 | GS-05 | 67,424 |
| 1 | E-5 | 7,456 | 1 | GS-04 | 8,608 |
| | | | 7 | GS-03 | 53,648 |
| | | $56,602 | | | $262,428 |
| | | | $56,602 | Military | |
| | | | 262,428 | Civilian | |
| | Total Cost: | | $319,030 | | |

Source: Field Research

**SHOP STORES**
**MCB CP LEJEUNE**

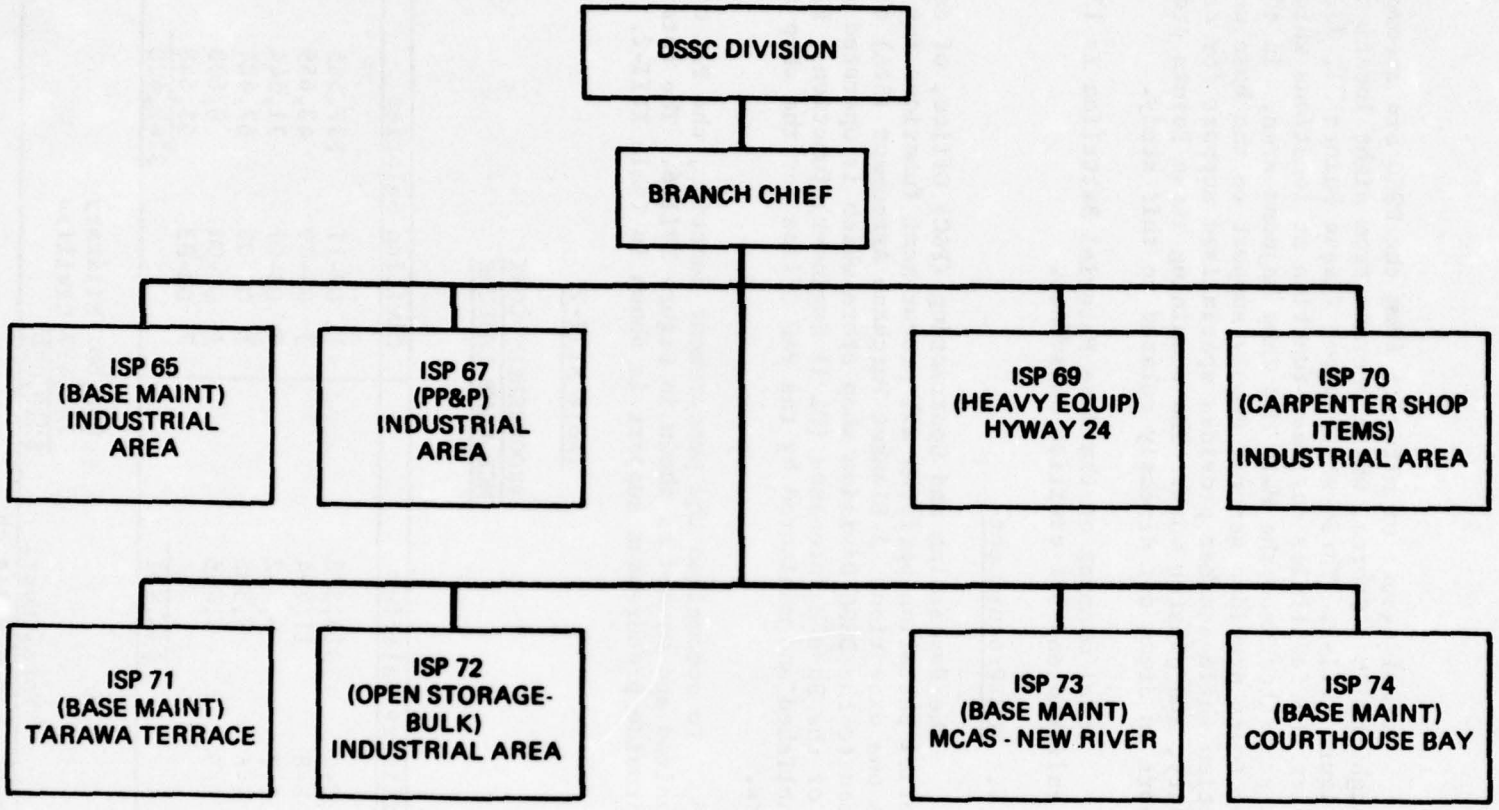



Figure XVII-5

## PURCHASING AND CONTRACTING ORGANIZATION

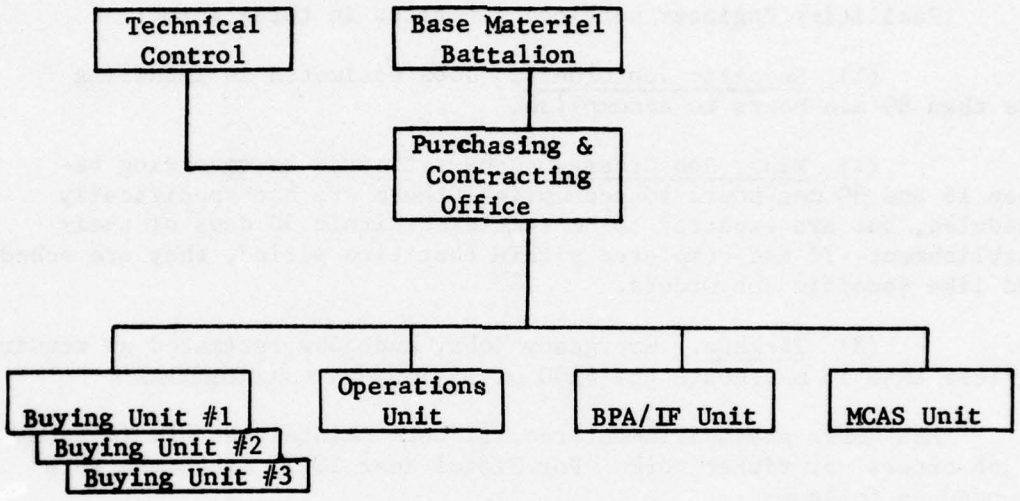



Figure XVII-6

5. Basic Statistics

| | CP Items | LP Items | Other* | Total |
|---|---|---|---|---|
| Line Items | | | | |
| MCB Total | 9,990 | 3,885 | 2,656 | 16,531 |
| Base Maintenance | 5,301 | 3,601 | 456 | 9,358 |
| Demands FY 1975 ($000) | | | | |
| MCB Total | $11,489.5 | $9,339.8 | $2,456.2 | $23,285.5 |
| Base Maintenance | 534.2 | 1,637.9 | 118.8 | 2,290.9 |
| Inventory Value, 30 June 1975 ($000) | | | | |
| MCB Total | $2,765.0 | $815.5 | $440.0 | $4,020.5 |
| Base Maintenance | 310.8 | 571.3 | 27.6 | 909.7 |
| Procurement Value, FY 1975 ($000) | | | | |
| MCB Total | $12,136.0 | $9,043.6 | $2,035.7 | $23,215.3 |
| Base Maintenance | 924.7 | 1,339.2** | 114.6 | 2,378.5 |

* Primarily General Services Administration (GSA).
** Includes $156,300 for POL.

## B. FACILITIES ENGINEER DATA

### 1. Functions and Operations

Facilities Engineer workload generates in three forms:

(1) Specific Job Orders. Jobs estimated as requiring more than 80 man-hours to accomplish.

(2) Minor Job Orders. Jobs estimated as requiring between 16 and 80 man-hours to accomplish; these are not specifically scheduled, but are expected to be completed within 30 days of their establishment--if not completed within that time period, they are scheduled like Specific Job Orders.

(3) Tickets. Emergency jobs, and jobs estimated as requiring less than 16 man-hours and $100 of materiel to accomplish.

Man-hours accomplishment records were maintained only in terms of job orders vs. ticket work. For Fiscal Year 1975, man-hours were expended as follows:

| | |
|---|---|
| Ticket work | 273,800 man-hours |
| Job Orders | 501,733 man-hours |
| Total | 775,533 man-hours |

### 2. Scheduling

Scheduling is accomplished within the Work Management Branch of the Maintenance and Repair Division. The scheduler reviews the job materiel requirements and the shop (i.e., man-hour) requirements identified by the planner/estimator of the Operations Division. A tentative shop schedule is developed for each job, projecting as far ahead as three to four months. Job projections--tentative schedules--are based primarily on the availability of shop manpower, but they also consider projected materiel availability and weather factors.

Based on this tentative schedule, a Required Delivery Date (RDD) is established for the list of materiel identified for the accomplishment of the job. This RDD is one week to ten days prior to the scheduled start date of the job, and the Uniform Materiel Movement and Issue Priority System (UMMIPS) priority of the requirement is selected based on this RDD.

Approximately one week prior to the date the job is scheduled to begin, a review is made to determine materiel availability.

The estimated arrival date of materiel which has not yet been received is reviewed, and the job is continued on the schedule or rescheduled accordingly. Gaps in the workload schedule are filled with preventive maintenance jobs and specific work orders held over from previous schedules due to the late arrival of materiel.

Jobs are generally not started until after all materiel is available. BPA authority is used to buy small amounts of materiel to enable a job to be started--the precise definition of "small amounts" would vary depending on the requirement for the job which is being delayed by the lack of materiel. Base Maintenance has authority to order materiel up to $250 against established BPAs without prior clearance from the Purchasing and Contracting Office of the Base Materiel Battalion.

3. Supply Support - Job Orders

The Work Management Branch of the Maintenance and Repair Division is also responsible for obtaining materiel for the support of Job Orders. The Materiel List (Bill of Materials - BOM) developed by the Planning/Estimating Branch is furnished to the Work Management Branch, which uses this as the basis for ordering materiel from Shop Stores Branch of the DSSC. The Shop Stores Branch pulls available materiel, segregates it for the identified job, and charges Base Maintenance.

The BOM is processed to the Stock Management Branch of the DSSC for those items which are not available on post. If the required item is one which is not ordinarily stocked by the DSSC, required quantities are ordered citing the customer's (i.e., Base Maintenance) funds. If the required item is ordinarily carried but is out of stock, required quantities are ordered using stock fund dollars to finance the pipeline, regardless of the required amount and its relationship to the local authorized stock level.

Receipts against BOM requirements are segregated, with the Base Maintenance organization advised daily of new receipts.

The Base Maintenance Officer sends for materiel from the Shop Stores Branch when a job is to be started.

At the time of the Study Team visit, it was estimated that BOMs representing approximately one week of effort were completed and available. The statistics were:

Completed BOMs available for scheduling: 13 projects with a total of 75 line items.

BOMs awaiting some portion of their materiel: 205 projects with a total of 3,584 line items.

Work in progress: 184 projects with a total of 2,635 line items.

C. MCB SUPPLY

1. Supply Support to Facilities Engineer (FE)

a. The Direct Support Stock Control is the activity through which supplies are obtained. The DSSC stocks and provides supplies and maintains records on items provided for general use and use by noncombat units. The items cover a wide range, from administrative supplies to Facilities Maintenance items (nails, plumbing, electrical, etc.). The supply support operation at Camp Lejeune, North Carolina, is representative of the DSSC distribution system and is considered a typical supply activity which supports noncombat units such as the FE on an established installation. The DSSC Division is considered a retail type operation. Consumable type items to support the FE when received through the Marine Corps Supply Activity (MCSA) distribution system or through local purchase sources, are placed in the various shop store issue points and are either sold directly to the Facilities Engineer activity either through a self service type operation, or over the counter issues as required. The Shop Store Branch located within the DSSC organization provides the FE consumable items in support of day-to-day FE Real Property Maintenance Activity (RPMA) operations to all echelons of base maintenance through simplified supply and accounting procedures by making issues to authorized customers without a formal requisition. In addition, the shop stores set aside or preposition materiel required for planned requirements based on approved work orders. This branch has eight repair parts issue points to provide support to the base maintenance activities. Figure XVII-7 portrays the issue points located throughout Camp Lejeune who provide RPMA logistics support.

b. Type of FE Materiel Stocked. The Base maintenance activity obtains materiel for RPMA through two primary DSSC sources: (1) Shop Store Branch, and (2) the Self Service Branch. Each source provides an assortment of stock necessary to accomplish the base real property maintenance program. A general category of stock provided by each source is listed below:

## SHOP STORE ORGANIZATIONAL CHART

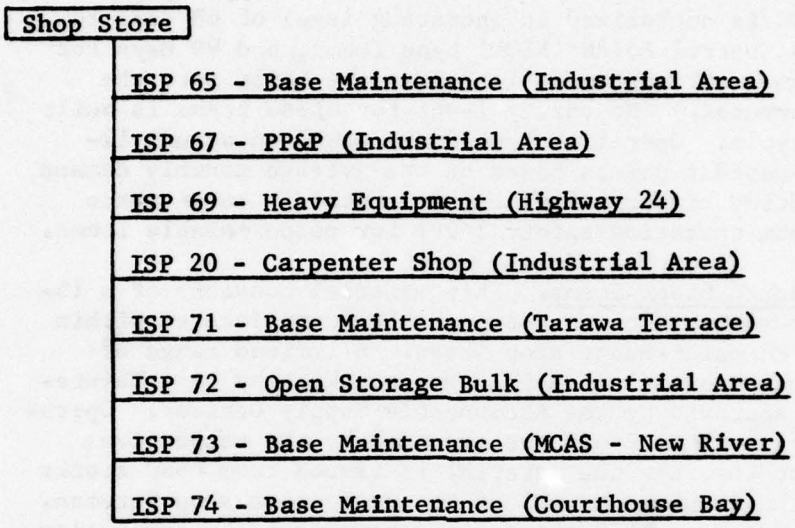



Figure XVII-7

### Type of Stock

| Self Service Store (one store) | Shop Store (3 stores) |
|---|---|
| Administrative Supplies | Construction Supplies |
| Housekeeping items | Electrical Supplies |
| Hand tools | Telephone Supplies |
| Mess Hall equipment and supplies | Plumbing Supplies |
| Paints | Paints |
| Industrial Organizational Equipment | Compressed Gases |
| Blank Forms | Lumber products |
| Safety Items | Bulk and Packaged Fuels |
| | Repair Parts for Heavy Equipment and grass curring equipment |
| | Packing and shipping materials |
| | Limited spares for commercial vehicles |

Inventory value of shop store items - less the insurance items (Issue Point 88) is as follows:

| CP | LP | Other |
|---|---|---|
| $357,185 | $530,730 | $36,923 |

c. Authorized Stock Levels. As materiel is received, it is stocked in various issue points, and sold directly to the customer usually across the counter or through a self service-type operation. Generally, the DSSC is authorized an operating level of 60 days for National Inventory Control Point (NICP) type items, and 90 days for local purchase items. (Procurement leadtimes are built into the operating level formulas.) No safety level for these items is built into the reorder cycle. Operating levels are based on actual 12-months usage with reorder points based on the average monthly demand plus pipeline/leadtime history of each item stocked. Subsistence has a 30-day maximum operating safety level for nonperishable items.

(1) Bench Stock Items. This materiel consists of a 15-day supply of fast moving, low cost expendable items located within each of the major FE maintenance shop areas. A limited range of expendable items has been selected for shop stockage by Base Maintenance Officer and approved by the Accountable Supply Officer. Operations and Maintenance (O&M) funds are expended by the respective maintenance shop at the time the materiel is issued from DSSC stocks and placed under the issuing control of the respective shop foreman. Resupply of the items from DSSC stocks is accomplished by submission of a locally preprinted issue request to the DSSC by the shop foreman or his designated representative.

(2) Insurance Items. These items are the slow moving items for which consumption or usage cannot justify a regular level. Stockage is limited to one-for-one replacement ordered immediately--regardless of reorder point. The Base Maintenance Officer and the Accountable Supply Officer approve the retention of these items. As of 30 June 1975, Issue Point 88 (insurance items) contained materiel valued at $79,408.

d. Stock Replenishment. Items are normally requisitioned through the Marine Corps Unified Materiel Management Systems (MUMMS) from various central supply sources. These sources include the Defense Supply Agency (DSA) Centers, GSA, ICPs, and local purchase sources through the base purchasing and contracting (P&C) activity. In addition to these sources, the P&C activity has established a local purchase function within the DSSC complex which is currently manned by one clerk. The clerk performs local purchase buys using BPAs for emergencies, or out-of-stock items needed to continue RPMA work for approved work orders for the base maintenance activity. The BPA clerk has immediate access to about 102 BPAs, and is authorized to purchase up to $500 worth of materiel for each work order requirement to support the base maintenance (Facilities Engineer) operation. Table XVII-3 reflects the supply sources utilized during Fiscal Year 1975.

Table XVII-3

SOURCES OF SUPPLY AND AMOUNTS - FACILITIES ENGINEER SUPPLY SUPPORT
(Fiscal Year 1975)

| Source | Dollar Value |
|---|---|
| TACOM | $43,804 |
| DCSC | 431,224 |
| DESC | 29,763 |
| DGSC | 147,338 |
| DISC | 139,600 |
| DPSC | 3,836 |
| GSA | 108,125 |
| DFSC | 4,713 |
| Other DoD | 3,359 |
| Local Purchase (P&C) | 1,373,579 |
| MPB (MCSA-MOWASP stocks) | 93,117 |
| Total | $2,378,458 |

Source: Field Research

e. Funding. Inventories of DSSC stocks are financed by the Marine Corps stock fund. The stock fund is a revolving fund but does not revolve at the local level. Stock funds are established on planning estimates provided to each installation based on local budget requests/ estimates and upon past usage performance by customer requirements drawing from the central supply activity. During the latter part of Fiscal Year 1975, Camp Lejeune was placed under austere stock fund constraints in an effort to draw down inventory stocks; however, it was stated that mission essential materiel was adequately funded with no adverse impact on operational requirements. Marine Corps Order 4443.9B, dated 20 August 1973 provides the general policies regarding stock funding procedures for DSSC inventories and are summarized as follows:

(1) DSSC Stocked Items. These items are regularly stocked by the DSSC outlets and are items for which inventory records are maintained. Such materiel while in DSSC stock is considered stock fund materiel. When materiel is issued from stock, customer O&M funds are obligated and the stock fund is reimbursed through Comptroller channels at Headquarters level.

(2) Not Carried Items. These items are not stocked in the DSSC outlets and are considered to be items of a nonrecurring nature for which no requisitioning objective has been established. When these items are purchased, customer funds will be used to procure the materiel.

(3) Base Maintenance Insurance Items. These items are essential materiel for which an occasional demand is necessary to prevent emergency conditions caused by unacceptable leadtimes, but not sufficent to warrant a classification for regular stock. These items are procured with customer O&M funds, and are stored in the DSSC issue points until required.

f. Materiel Issues to Base Maintenance (Facilities Engineer). Upon determination by the base maintenance activity that repair items are needed to accomplish an approved work order project, action is taken by base maintenance personnel to obtain the items from the various self service DSSC shop store stocks. If all materiel is available, materiel is immediately issued and is charged against each individual work order established to accomplish the RPMA project. If materiel is not immediately available, then regular supply requisitioning channels are utilized to obtain the items necessary to satisfy the work order requirement. Delayed materiel is usually placed in a DSSC work order holding area pending receipt of all items. When all items are received, the base maintenance activity is notified, and all work order materiel (BOMs) is issued directly to the maintenance shop performing the actual work. The flow of supply requirements through the system until the materiel is received by the customer is shown in *Figure XVII-8*.

g. Item Excess Program

(1) Retention of Excesses. For DSSC activities the economic retention stock level for excess assets is thirty-six months. This quantity is over the requisitioning objectives established for each item carried on shop store records. All excessing actions are computed through established automated excess program techniques with an established review of all assets being conducted on a semi-annual basis (end of first and third quarters - March/September). In addition, each DSSC may determine that an item is excess at any point in time prior to the established quarterly review cycle, and may reduce these assets if considered detrimental to their stock fund budget.

(2) Reporting of Excesses

(a) Disposal Actions Authorized. If the total materiel excess to the economic retention stock is equal to the total on-hand assets authorized, and the dollar value of excess assets is ten dollars or less, the excess assets will be transferred to the Defense Property Disposal Office (DPDO).

(b) Reporting and Retention. When the total materiel excess is equal to the economic retention stock is equal to the

**SUPPLY SUPPORT-BASE MAINTENANCE**
**MCB CAMP LEJEUNE**

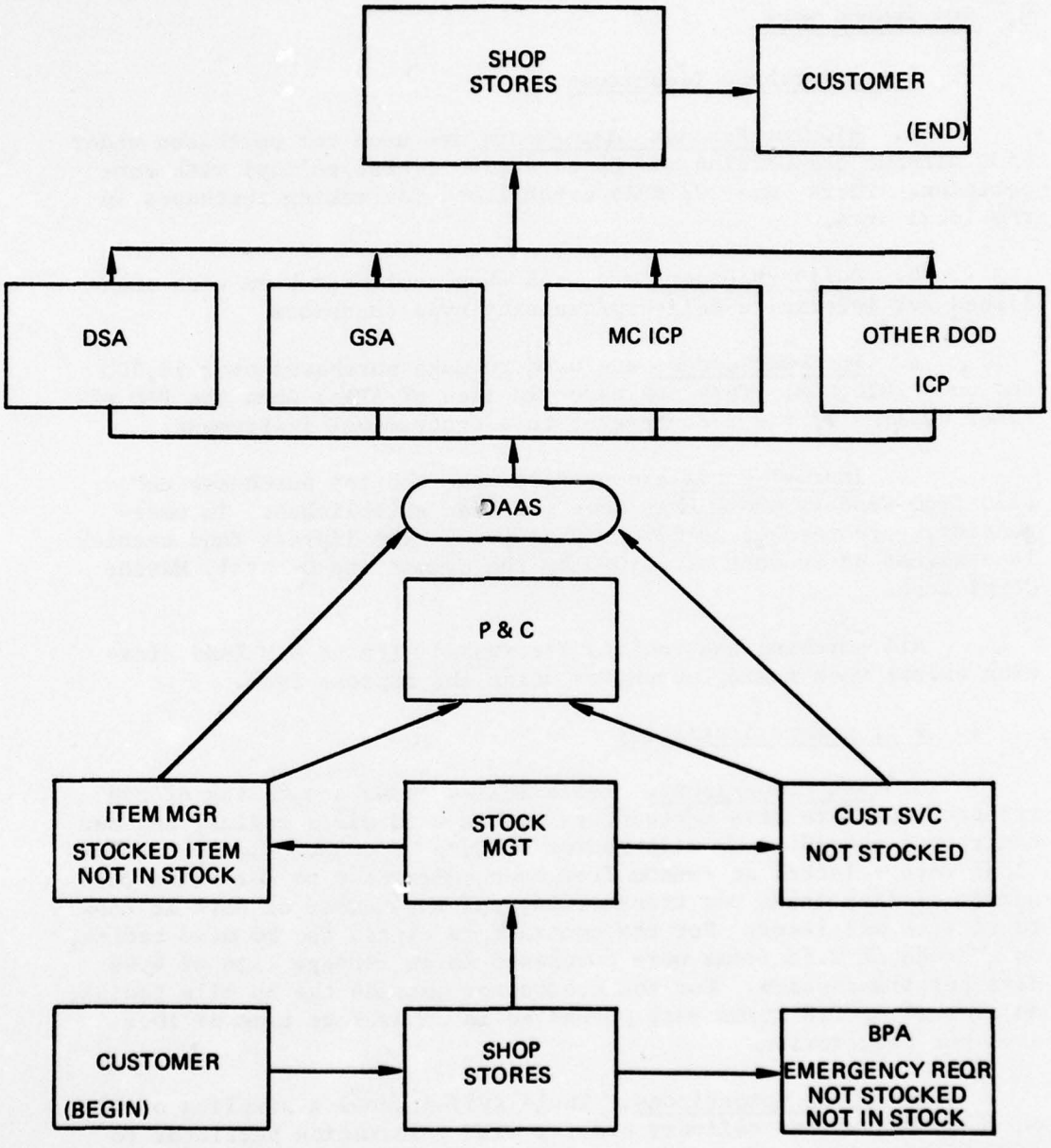



Figure XVII-8

total assets authorized, and the dollar value of excess assets is greater than ten dollars, then excess assets are reported to the Inventory Control Point for disposition.

D. MCB PROCUREMENT

1. Local Purchase Techniques

a. Blanket Purchase Agreements are used for purchases under $500 without competition and up to $2,500 (local policy) with competition. There are 102 BPAs established for making purchases in the local area.

b. Delivery Orders are used when contracts have been established for indefinite delivery/quantity type contracts.

c. Purchase Orders are used to make purchases over $2,500 and under $10,000. They are used (in lieu of BPAs) when the P&C officer desires to tie a contractor to a contractual instrument.

d. Imprest Funds are used to make routine purchases under $150 from vendors where BPAs have not been established. In emergencies, purchases up to $300 may be made. The imprest fund cashier is assigned an account of $3,000 by the Commanding General, Marine Corps Base.

All purchase instruments are funded with an O&M fund citation except when making purchases using the imprest fund.

2. Procurement Statistics

a. BPA Comparisons. Table XVII-4 shows a sampling of BPA transactions with five contractors within a 50 miles radius, and one contractor outside a 50 mile radius of Camp Lejeune. Twenty transactions were selected at random from each contractor to determine the number of line items per transaction, and the number of days it took to receive all items. For the contractors within the 50 mile radius, an average of 2.68 items were purchased in an average time of 4.46 days per transaction. For the contractor outside the 50 mile radius, an average of 2.8 items were purchased in an average time of 10.6 days per transaction.

b. PO/DO Comparisons. Table XVII-5 shows a sampling of 40 purchase orders and delivery orders, with information pertinent to each transaction. Of particular interest are the columns entitled "number days to order" and "number days to delivery." The first

Table XVII-4

BPA COMPARISONS
MCB CAMP LEJEUNE

| Within 50 Mile Radius | | | | | | | | | | 50-100 Mile Radius | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ASKEWS | | H.V. DICK | | NOLAND | | LONGLEY | | LENOIR | | DILLION | |
| # of Item | # of Days | # of Item | # of Days | # of Item | # of Days | # of Item | # of Days | # of Item | # of Days | # of Item | # of Days |
| 1 | 4 | 1 | 6 | 2 | 9 | 4 | 0 | 1 | 1 | 3 | 1 |
| 1 | 1 | 3 | 2 | 1 | 4 | 3 | 1 | 2 | 2 | 3 | 2 |
| 1 | 7 | 1 | 1 | 1 | 22 | 6 | 6 | 1 | 0 | 1 | 3 |
| 1 | 0 | 1 | 6 | 1 | 3 | 2 | 0 | 1 | 0 | 5 | 6 |
| 7 | 1 | 2 | 9 | 1 | 3 | 1 | 1 | 1 | 0 | 1 | 3 |
| 3 | 1 | 2 | 3 | 2 | 7 | 4 | 0 | 1 | 8 | 8 | 18 |
| 1 | 3 | 4 | 2 | 1 | 1 | 3 | 2 | 2 | 1 | 1 | 3 |
| 1 | 16 | 2 | 12 | 1 | 9 | 3 | 1 | 5 | 0 | 1 | 17 |
| 4 | 2 | 1 | 3 | 1 | 14 | 3 | 1 | 1 | 4 | 6 | 4 |
| 8 | 4 | 4 | 1 | 2 | 7 | 4 | 1 | 6 | 0 | 1 | 32 |
| 3 | 1 | 2 | 29 | 3 | 8 | 22 | 1 | 1 | 4 | 3 | 4 |
| 3 | 1 | 2 | 17 | 4 | 69 | 2 | 2 | 4 | 0 | 3 | 9 |
| 6 | 3 | 1 | 1 | 1 | 2 | 13 | 1 | 1 | 0 | 1 | 0 |
| 1 | 0 | 3 | 3 | 1 | 9 | 2 | 1 | 3 | 1 | 5 | 6 |
| 1 | 5 | 4 | 3 | 1 | 1 | 4 | 3 | 2 | 0 | 7 | 17 |
| 3 | 1 | 1 | 7 | 1 | 2 | 5 | 4 | 2 | 0 | 2 | 15 |
| 2 | 2 | 1 | 15 | 1 | 1 | 1 | 0 | 3 | 10 | 1 | 24 |
| 3 | 1 | 1 | 0 | 3 | 6 | 2 | 18 | 3 | 2 | 1 | 10 |
| 3 | 0 | 4 | 2 | 1 | 3 | 4 | 3 | 3 | 0 | 1 | 30 |
| 1 | 1 | 4 | 0 | 2 | 8 | 4 | 1 | 4 | 1 | 2 | 8 |
| 54 | 54 | 44 | 122 | 31 | 188 | 92 | 47 | 47 | 34 | 56 | 212 |

| | With 50 Mile Radius | | Outside 50 Mile Radius | |
|---|---|---|---|---|
| | Total Items | Total Days | Total Items | Total Days |
| | 54 | 54 | 56 | 212 |
| | 44 | 122 | | |
| | 31 | 188 | | |
| | 92 | 47 | | |
| | 47 | 34 | | |
| Total | 268 | 445 | 56 | 212 |
| Average | 2.68 | 4.45 | 2.8 | 10.6 |

Table XVII-5

FISCAL YEAR 1975 PO/DO COMPARISONS
MCB CAMP LEJEUNE

| Item Identification | No. Items | Total Value | Qty 1st Item | Unit Price | Number of Days to Order | Number of Days to Delivery |
|---|---|---|---|---|---|---|
| Condensing Unit | 1 | $5,788.00 | 1 | $5,788.00 | 26 | 52 |
| Corbin Locks | 1 | 214.20 | 36 | 5.95 | 4 | 95 |
| Evaporator Coils | 2 | 9,664.00 | 90 | 89.60 | 14 | 64 |
| Bearing Kits | 5 | 245.49 | 2 | 6.88 | 2 | 22 |
| Oil Tanks | 2 | 388.54 | 1 | 305.00 | 6 | 10 |
| Yale Latches | 1 | 87.96 | 12 | 7.33 | 1 | 72 |
| Doors, solid core** | 1 | 148.80 | 3 | 49.60 | 1 | 15 |
| Aluminum Pipe | 3 | 1,075.80 | 2 | 106.40 | 4 | 25 |
| Spray Valve | 6 | 109.76 | 2 | 18.00 | 3 | 20 |
| Door Bearings** | 1 | 112.50 | 50 | 2.25 | 7 | 41 |
| Steam Coil | 1 | 740.00 | 1 | 740.00 | 12 | 76 |
| Moisture Barrier | 1 | 89.30 | 1 | 89.30 | 14 | 14 |
| Locks | 2 | 174.00 | 3 | 30.00 | 14 | 65 |
| Window Glass | 2 | 200.16 | 2 | 67.20 | 2 | 52 |
| Tile, ceiling | 1 | 268.80 | 14 | 19.20 | 11 | 79 |
| Locks | 2 | 329.00 | 10 | 29.00 | 11 | 60 |
| Tile, floor | 2 | 89.40 | 48 | .80 | 8 | 62 |
| Insecticide | 2 | 1,534.40 | 32 | 16.70 | 17 | 30 |
| Plumbing, Misc. | 4 | 147.18 | 12 | 3.89 | 20 | 59 |
| Plumbing, Misc. | 2 | 232.80 | 24 | 4.85 | 21 | 56 |
| Tile, ceramic | 1 | 27.84 | 120 | .23 | 20 | 26 |
| Locks | 1 | 175.92 | 24 | 7.33 | 6 | 56 |
| Switches | 1 | 9.30 | 6 | 1.55 | 1 | 15 |
| Motor, Fan** | 7 | 222.50 | 3 | 2.34 | 7 | 33 |
| Lock | 1 | 109.20 | 24 | 4.55 | 10 | 104 |
| Paint | 1 | 2,649.60 | 115 | 23.04 | 5 | 26 |
| Panic Locks | 2 | 769.30 | 4 | 109.90 | 6 | 16 |
| Tile, ceramic | 5 | 271.76 | 96 | 1.16 | 14 | 51 |
| Paint* | 13 | 23,506.28 | 48 | 7.15 | 3 | 22 |
| Rock Salt* | 3 | 3,214.85 | 23 | 28.45 | 1 | 11 |
| Paint* | 7 | 10,152.84 | 24 | 3.30 | 11 | 25 |
| Paint* | 6 | 5,004.10 | 300 | 2.70 | 9 | 43 |
| Paint* | 18 | 15,945.06 | 36 | 3.12 | 11 | 36 |
| Plumbing | 2 | 217.00 | 50 | 2.17 | 7 | 20 |
| Disposer | 1 | 420.00 | 4 | 105.00 | 12 | 41 |
| Plumbing | 2 | 175.62 | 24 | .50 | 81 | 119 |
| Panic Locks | 2 | 392.00 | 2 | 98.00 | 8 | 70 |
| Glass, Window** | 1 | 114.75 | 5 | 22.95 | 1 | 65 |
| Tile, floor | 3 | 735.00 | 250 | .98 | 4 | 40 |
| Gypsum Board** | 1 | 135.00 | 50 | 2.70 | 1 | 12 |
| | | | | Total Days | 416 | 1,800 |
| | | | | Average Days | 10.4 | 45 |

Source: Field Research

* Delivery Orders ** Vendor located within 50 miles of Camp Lejeune

column highlights the number of days the P&C office held a requirement before placing a firm PO/DO on the vendor and the second column highlights the number of days from receipt or the requirement by P&C until delivery by the vendor. For example, the first item, a Condensing Unit, was ordered 26 days after the P&C office had received the documentation. The next column shows the same item was received 52 days after the documentation was received by the P&C office. For all 40 transactions, the average time that documentation was in P&C before ordering was 10.4 days. The average time it took to receive the supplies after P&C had received the documents was 45 days.

3. Local Purchase Costs

The dollar value of the procurements processed in behalf of the base maintenance operation for Fiscal Year was $1,074,892.

In addition it was estimated that the BPA clerk in the DSSC shop store purchased $108,000 per year. This amount and the amount spent by P&C for base maintenance totals $1,182,892 expended per year.

The total number of actions and dollar volume expended by P&C in Fiscal Year 1975 for the entire operation at Camp Lejeune was:

| Total Actions | Dollar Volume |
|---|---|
| 33,706 | $29,177,597 |

These actions include purchase of supplies and services.

The total amount spent in Fiscal Year 1975 for supplies at Camp Lejeune was $23,215,300. Of this amount, $1,182,892 or 5% was locally purchased. The Direct Support Stock Control had $2,053,147 personnel costs for Fiscal Year 1975. Since 5% of the total processed was for Base Maintenance, local purchase, the amount of supply personnel cost attributable to base maintenances local purchase is:

$$\begin{array}{r} \$2,053,147 \\ \times \quad .05 \\ \hline \$102,657 \end{array}$$

In addition, one wage board WD-5 works part time picking up and delivering supplies to base maintenance. This amounted to $5,400. Total supply costs are:

| | |
|---|---|
| $102,657 | Supply Administration |
| 5,400 | Pickup and Delivery |
| $108,057 | Total |

Total personnel costs in the Purchasing and Contracting Office were:

| | |
|---|---|
| $262,428 | Civilian |
| 56,602 | Military |
| $319,030 | Total |

The total purchased by the above personnel was $29,177,597 of which $1,182,892 was purchased for base maintenance. The base maintenance of the total is 4%.

Since 4% of the total expenditures was for purchases for base maintenance, it is assumed that 4% of the P&C manning costs are attributed to purchasing for base maintenance. This amounts to $319,030 x .04 = $12,761.

Further, the Finance and Accounting Office estimates that one GS-4 with an annual salary of $8,608 is engaged in paying bills for items locally purchased for base maintenance.

A summary of the costs for obtaining local purchase items for base maintenance follows:

| | |
|---|---|
| $108,057 | Supply Costs |
| 12,761 | Procurement |
| 8,608 | Bill Paying |
| $129,426 | Total |

4. Contractor Operated Parts Stores (COPARS)

Camp Lejeune has a COPARS contract for support of their commercial vehicle fleet. The same contract provides support to the Marine Corps Air Station at Cherry Point, North Carolina. The total amount expended under the contract was:

| | |
|---|---|
| $484,688 | at Camp Lejeune |
| 100,000 | at Cherry Point |
| $584,688 | Total |

The assistant officer in charge of the P&C division estimated that for issuance of the Invitation for Bid (IFB), negotiation, administration, contracting officer representative duties, issuing modifications, and paying bills to the vendor costs approximately $10,000 per year.

The personnel cost for every $1,000 procured under the COPARS contract is calculated to the $17.09.

E. INDIVIDUAL ITEM RESEARCH - BOMs

1. Minor Job # 1018: Install Vapor Proof Outlets. This job was scheduled on 31 March 1975, with an estimated completion date of 25 April, and was still awaiting parts as of 2 October. The problem item was the vapor-proof receptacles, which are local purchase items. A purchase order was issued on 14 March, and revised delivery dates were furnished by the supplier as follows: 27 June, 11 July, and 25 September.

2. Job # 3411: Replace Gear Control Window Operators. The materiel requirement was established on 29 January 1975, identifying a manufacturer's name and part number; this proved to be an item which is no longer being manufactured. A source of supply was finally located on 25 August, with a bid unit price of $215, where the original estimate was $75. Approval to process with the procurement action was finally received on 29 September.

3. Job # 3461: Replace Steam Reducing Station. This job was established on 17 March, and the supporting materiel has been received in partial shipments. As of 1 August, three of 43 required items were still outstanding. These items, all due-in from the Defense Construction Supply Center, were:

Valve, gate, 4820-00-684-6169, 4 each @ $22.50 = $90.00
Elbows, 90°, 4730-00-199-2106, 8 each @ 30¢ = 2.40
Tee, reducing, 4730-00-287-0180, 2 each @ $2.80= 5.60

Total materiel in stock, and being held since at least 1 August has a total value of $1,565.82, against a total of $98 of materiel outstanding.

4. Job # 3462: Electric Service for Meteorology Van at MCAS. Job established 27 March 1975, with a total of nine items required. One local purchase item, Square D Raintight Switch, 100 amp, 208 V, 3 phase, @ $80, is still due-in, from an identified BPA source in Jacksonville, North Carolina; on-hand inventory for this job totals $254.15.

## CHAPTER XVIII

## MARINE CORPS BASE, CAMP S. D. BUTLER, OKINAWA

### A. MANAGEMENT DATA

1. Overall Organization.

The organization designated as Marine Corps Base (MCB), Camp Smedley D. Butler, is an overall title covering a number of separate Marine Corps locations on the island of Okinawa. Among the larger of these locations are included Camp Foster, which is located in the Zukeran area; Camp McTureous, which is located several miles north of Okinawa City (formerly known as Koza); and, Camp Hansen, which is a maneuver area located about 30 miles north of Naha port. To indicate the range covered by "Camp Butler", Camps Foster and Hansen are completely separate installations which are about 25 miles apart.

MCB Camp Butler is organized as shown in Figure XVIII-1 to provide garrison support to Marine Corps activities on Okinawa. Camp Butler represents the nondeployable Marine Corps forces on Okinawa, and provides the support base for the Fleet Marine Forces on that island.

2. Facilities Engineer Organization. The Facilities Engineer (FE) is responsible for maintenance and repair of Marine Corps facilities, minor construction, and utilities operation. The FE, overall, is organized as shown in Figure XVIII-2 for the accomplishment of these functions. The Maintenance Department is organized as shown in Figure XVIII-3. Authorized manpower of the FE is shown in Table XVIII-1.

3. Supply Organization.

The Base Supply Office provides supply, procurement and contracting and property accounting services for the MCB. It is organized as shown in Figure XVIII-4. The Direct Support Stock Control (DSSC) of the Base Supply Office "provides 100% supply support to MCB, Camp Butler". The DSSC is organized as shown in Figure XVIII-5, with manpower authorized as follows:

| | |
|---|---|
| Officer | 7 |
| Enlisted | 83 |
| US Civilian | 2 |
| Local National | 34 |
| Total | 126 |



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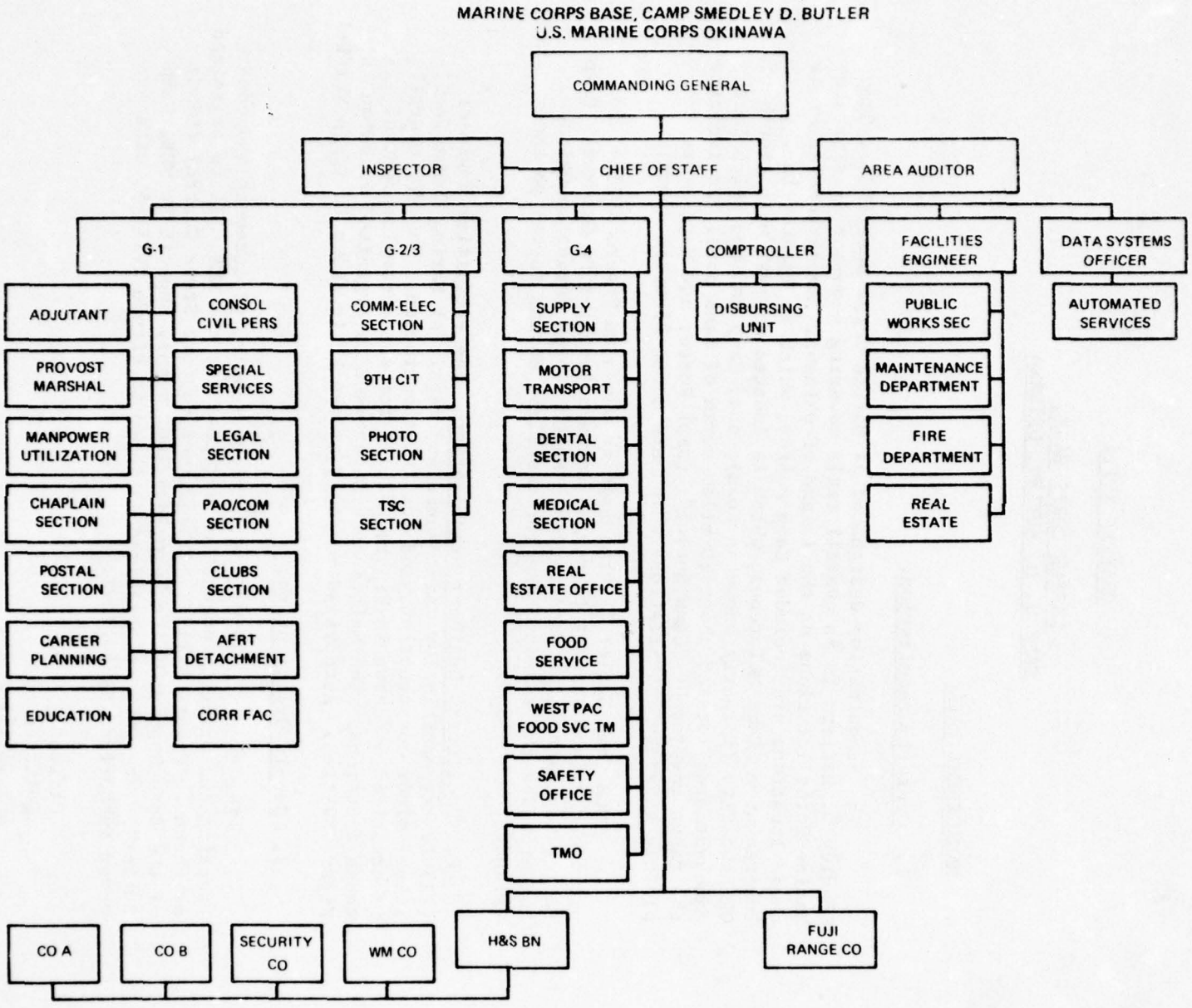



Figure XVIII-1

Figure XVIII-2

## MAINTENANCE DEPARTMENT - MCB CAMP BUTLER

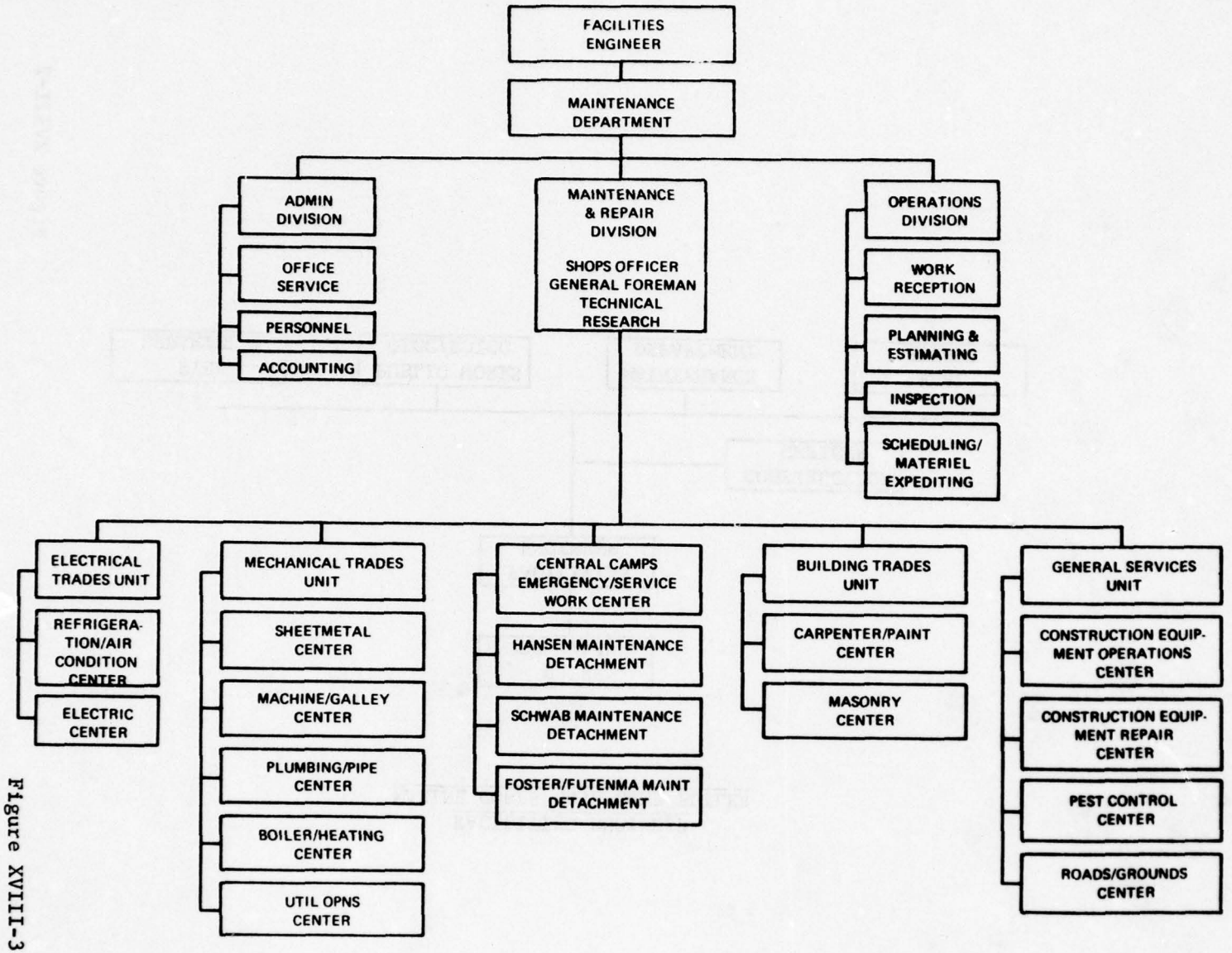



Figure XVIII-3

Figure XVIII-4

DIRECT SUPPORT STOCK CONTROL
MARINE CORPS BASE CAMP BUTLER




Figure XVIII-5

Table XVIII-1

FACILITIES ENGINEER MANPOWER AUTHORIZATION

| | Military | | US | Local | |
|---|---|---|---|---|---|
| | Off | Enl | Civilian | National | Total |
| Office of the FE | 3 | 3 | 2 | - | 8 |
| Fire Department | - | - | 4 | 68 | 72 |
| Public Works OICC | 2 | 2 | 6 | 8 | 18 |
| Maintenance Department | 6 | 75 1/ | 31 | 469 | 581 |
| Real Estate | - | - | 1 | 3 | 4 |
| Total | 11 | 80 | 44 | 548 | 683 |

Source: Field Research

1/ Includes 18 Seabees

4. Procurement Organization

The Procurement and Contracting (P&C) function is organizationally assigned to the Base Supply Officer per Figure XVIII-6. The two functions are physically separated by an approximate distance of 15 miles with the base supply function located at Camp McTureous and the P&C function located in the Zukeran area. The mission of the P&C is to procure nonstandard supplies, provide service contracts, and provide procurement assistance to all Marine Corps units on Okinawa. The P&C office has established Blanket Purchase Agreements (BPAs) on Okinawa, and has designated personnel within the Facilities Engineer organization to place calls against the BPAs for purchase under $500.

Table XVIII-2 highlights the number of authorized personnel by grade and annual salary.

The salaries (Table XVIII-2) are basic pays. They do not include the quarters and subsistence allowances for military, cost of living allowance for United States civilians, or bonuses paid to local national civilians.

Total personnel cost to perform procurement functions for Marine Corps is:

$ 92,776 military
47,400 civilian
56,736 local national civilian
$196,912 Total Personnel Cost

PROCUREMENT ORGANIZATION
MARINE CORPS BASE CAMP BUTLER

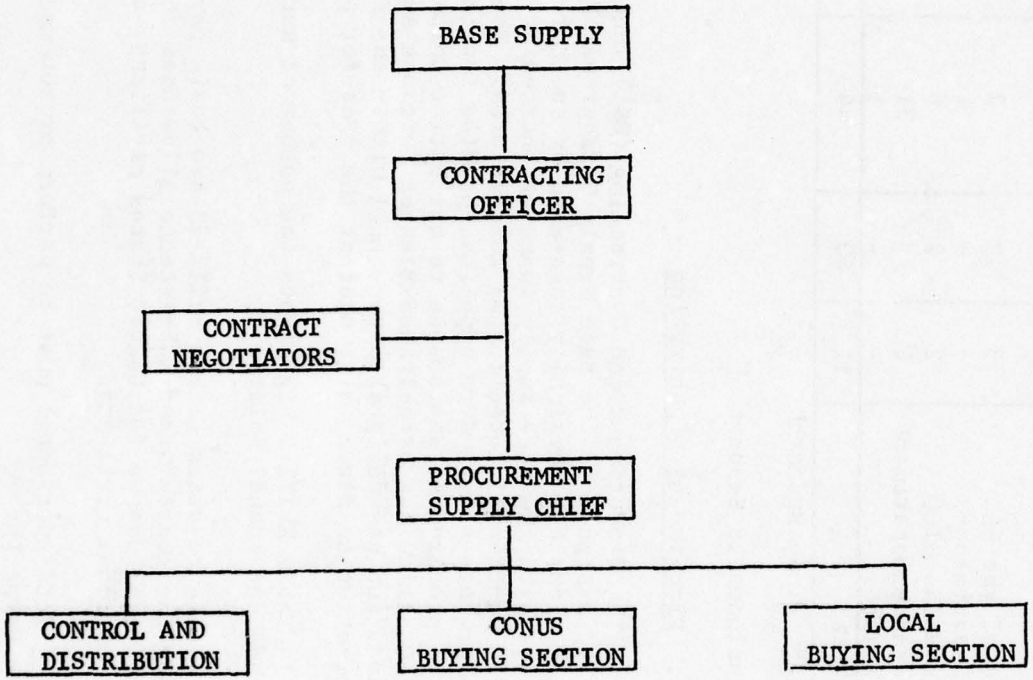



Figure XVIII-6

## Table XVIII-2

## PROCUREMENT AND CONTRACTING PERSONNEL AUTHORIZATIONS

| Military Grade | Number | Annual Salary | Total |
|---|---|---|---|
| 0-4 | 1 | $17,640 | $17,640 |
| E-8 | 1 | 11,376 | 11,376 |
| E-7 | 2 | 9,900 | 19,800 |
| E-6 | 1 | 8,688 | 8,688 |
| E-5 | 2 | 7,092 | 14,184 |
| E-4 | 1 | 5,988 | 5,988 |
| E-3 | 3 | 5,040 | 15,120 |
| | | TOTAL | $92,796 |

| Civilian Grade | Number | Annual Salary | Total |
|---|---|---|---|
| GS-12 | 1 | $20,923 | $20,923 |
| GS-9 | 1 | 14,553 | 14,553 |
| GS-7 | 1 | 11,924 | 11,924 |
| | | TOTAL | $47,400 |

| Local National Civilian Grade | Number | Annual Salary | Total |
|---|---|---|---|
| IGS-7 | 1 | $ 6,468 | $ 6,468 |
| IGS-6 | 1 | 4,580 | 4,580 |
| IGS-5 | 3 | 4,200 | 12,600 |
| IGS-4 | 8 | 4,136 | 33,088 |
| | | TOTAL | $56,736 |

Source: Field Research

5. Basic Supply Statistics.

| | |
|---|---|
| Line Items | |
| DSSC Total | 22,800 |
| Inventory, 30 September 1975 | |
| DSSC Total | $4,418,000 |
| Procurement, Fiscal Year 1975 ($000) | |
| Local Purchase and ICP | $2,710.4 1/ |
| GSA | 934.8 |
| | $3,645.2 2/ |

1/ Of which local purchase accounted for an estimated 25%.

2/ Estimated procurement in support of Issue Point 91, which supports facilities engineer maintenance (see Paragraph C4, below), was $734,000; of this, local purchase was estimated as being 75%.

B. FACILITIES ENGINEER DATA

1. Functions and Operations

a. Types of work. The FE furnishes maintenance and repair for base facilities, does some minor construction, provides utilities on a limited basis and keeps utility systems in good repair; also provides fire protection, pest control, refuse collection and janitorial service by contract. Work is divided into two general categories:

(1) Emergency and Service Work--Emergency and service work is that which can be done within 16 man-hours or less, costs not more than $200 for labor and materiel, and should not involve more than two work centers. Work considered an emergency is to be done immediately.

(2) Major Specific Job Orders--Major specific job orders covers work that does not fall into the emergency and service category. Major specific job orders usually cost over $200, require more than 16 man-hours and involve more than two shops. Major specific job order work frequently requires extensive planning and collection of supplies listed on a Bill of Materials (BOM).

b. Work Generation. Work is generated by customer telephone calls, written requests and in-house inspection reports.

(1) Emergency and Service Work--Work of an emergency or service nature is telephoned to the work reception desk. Naval Facilities Engineering Command (NAVFAC) Form 9-11014/21 (Emergency or Service Work Authorization (Maintenance Management)) is prepared and forwarded to the respective shop to accomplish the work. Emergency work is also referred to the Emergency Service Detachments at Camps Schwab, Hansen, McTuerous and Marine Corps Air Station (MCAS) Futema.

(2) Major Specific Job Orders--Work beyond the scope of emergency and service becomes a major specific job order. The request, or in-house report, initiating the work is processed as follows:

(a) Planning and Estimating--Reviews the job and prepares work description, determines man-hours required and prepares listing of materiel required. The job order is returned to Operations for review and approval, and then to Scheduling.

(b) Scheduling forwards materiel list to Materiel Coordinating.

(c) Materiel Coordinator reviews materiel list for in-house availability (shop stock, residual area and/or excess); then forwards the list to Base Supply for action to obtain remainder of materiel either through central procurement (CP) or local purchase (LP). BOM items when received are accumulated in the installation supply holding area, Issue Point Number 98. Job is returned to the Scheduler when all materiels are available.

c. Scheduling. As each specific job order is received, the Scheduler initiates action toward final scheduling of that particular job. A scheduling plan is determined, then the job is held for a notification that materiel are available. The Scheduler completes a tentative schedule by estimating the man-hours that will be available for the respective work. Man-hours available for each work center to accomplish specific job orders are determined after man-hours are set aside for overhead, emergency service work and standing job orders. All tentatively scheduled work is reviewed at the weekly scheduling meeting and the firm schedule for major specific jobs established. Man-hours and materiel are resources that cannot always be easily managed and rescheduling of major specific job orders is frequently necessary.

d. Rescheduling. Major specific job orders when scheduled are assigned a committed starting date. A new starting date is given

if the original date cannot be met, or the holdup of the job cannot be cleared up. No statistics were available to determine number and value of major specific jobs that had to be rescheduled, although lack of supply was mentioned as a primary cause.

e. Statistics. Estimated distribution of man-hours and materiel costs for Fiscal Year 1975 are shown in Table XVIII-3.

2. Supply Support.

a. Base supply is the basic source of supply; however, procedures provide for the following:

(1) Shop Stock--Items of shop stock are drawn from base supply and are owned by the FE. The FE cites Operations and Maintenance (O&M) funds for the supplies before they are received. The shop stock consists of 1,500 line items, but an estimate of the value of the shop stock was not available.

Table XVIII-3

FISCAL YEAR 1975 FACILITIES ENGINEER WORKLOAD
MARINE CORPS BASE CAMP BUTLER

| Manhours | % of Total | Estimated Manhours | Labor Cost at $4.00 Per Hour |
|---|---|---|---|
| Indirect and Overhead Work | 35.9 | 406,000 | $1,624,000 |
| Emergency/Service Work | 13.8 | 156,000 | 624,000 |
| Standing Job Orders--Estimated | 22.1 | 250,000 | 1,000,000 |
| Standing Job Orders--Not Estimated | 11.1 | 125,000 | 500,000 |
| Minor Job Orders | 9.1 | 103,000 | 412,000 |
| Specific Job Orders | 8.0 | 90,000 | 360,000 |
| Total | 100.0 | 1,130,000 | $4,520,000 |

| Materiel and Contracts | % of Total | Estimated Cost of Materiel |
|---|---|---|
| Indirect and Overhead Work | 2.7 | 31,339 |
| Emergency/Service Work | 7.1 | 82,411 |
| Standing Job Orders--Estimated | 26.5 | 306,430 |
| Standing Job Orders--Not Estimated | 18.5 | 213,573 |
| Minor Job Orders | 7.9 | 91,697 |
| Specific Job Orders | 37.3 | 431,788 |
| Total | 100.0 | 1,157,238 |

Source: Field Research

(2) Installation Self-Service Store--The Self-Service store is used to draw hand tools, minor property items, office supplies and janitorial supplies. The value of the supplies and number of line items was not available.

(3) Bills of Materials--Items accumulated for major specific job orders are stored in the holding area located at Camp McTuerous. BOMs, although owned by the FE, are cared for and stored by supply personnel until drawn by the FE. Materiel with an estimated value of $22,576 were on hand to support 77 jobs.

(4) Insurance Items--Installation supply manages approximately 200 line items as insurance items. Supply holds the items in inventory until bought by the FE. Examples of items kept on hand are transformers, compressors, generator parts and water mains.

(5) Residual Area--Materiel left over from cancelled or completed major specific job orders are collected and stored in the FE area, frequently in the respective work center where they are likely to be used. Residual area materiel are checked for availability for newly planned jobs prior to initiating supply or procurement action. The number of line items of residual materiel was undetermined, but it was estimated to have value of $15,000 to $20,000.

(6) Excess Items--Personnel indicated that excess materiel, expecially from Army sources, were being used whenever possibil. Examples of items are air conditioning compressors, cable, wire, conduit and fan vents. The FE occasionally returns unused items to the installation supply activity usually without credit.

(7) Local Purchase--Personnel inferred that installation supply frequently cannot provide materiel from stock and local purchase action is taken. In some instances, United States manufactured items are not compatible with Japanese installed equipment and local purchases must be used. Prices in town (Okinawa) are high and local purchase is used only when required. It was stated that, "without local purchase activity work would have to be curtailed."

b. Bills of Materials

(1) BOMs are required for approximately 15% of the work of the FE. BOM requirements are forwarded to installation supply from the FE materiel coordinator by use of NAVFAC Form 9-11014/8 (Material Requirements/Issue Document) and action is initiated to acquire the items and assemble them in the holding area.

(2) Statistics for BOMs

(a) Major specific job orders with BOMs completed currently in progress:

| NR | Man-hours | Cost of Man-hours | Cost of Materiel | Cost of Jobs |
|---|---|---|---|---|
| 17 | 5,013 | $21,222 | $ 31,979 | $ 53,201 |

(b) Major specific job orders with BOMs completed:

| NR | Man-hours | Cost of Man-hours | Cost of Materiel | Cost of Jobs |
|---|---|---|---|---|
| 77 | 18,636 | $87,295 | $ 22,576 | $109,871 |

(c) Major specific job orders waiting for materiels:

| NR | Man-hours | Cost of Man-hours | Cost of Materiel | Cost of Jobs |
|---|---|---|---|---|
| *31 | 3,720 | $13,267 | $189,142 | $202,409 |

*16 of the 31 job orders were for $170,537 of materiel only.

3. Elimination of Minor Job Orders. Based upon instruction from Marine Corps Headquarters, the Minor Job Orders category has been eliminated. Work other than Emergency Service and Standing Orders will be considered Job Orders. The change places all work of the minor/major job order type with work Schedulers and reduces work planning by craft shop supervisors. The change will require that Schedulers have a better knowledge of the overall work program.

C. MARINE CORPS BASE SUPPLY

1. Marine Corps Okinawa Excesses.

Due to the movement of retrograde cargo from Southeast Asia, large Marine Corps excesses came to exist on Okinawa. To encourage the utilization/disposition of those excesses, an ordering freeze was applied during 1975--no stock replenishment requisitions were submitted from Okinawa from 17 January to 22 July 1975. During this period, units used their O&M funds to meet immediate requirements which could not be satisfied by Marine Corps stocks available on the island.

There is a continuing effort at reducing items and inventory from the Marine Corps supply organization on Okinawa. Some statistics on progress in the inventory area are:

Inventory as of 30 June 1975:

| | |
|---|---|
| On Hand | $5.6 million |
| Excess | $2.4 million |

Inventory as of 30 September 1975:

| | |
|---|---|
| On Hand | $3.2 million |
| Excess | $1.8 million |

An indication of the impact of the stock replenishment ordering freeze can be noted from data on due-in assets: due-in as of 30 June totaled $428,800; as of 30 September, due-in totaled $1.2 million.

Line items counts are rapidly dropping due to these excessing actions. Line items as of 11 September totaled 27,200; one week later, on 18 September, they had dropped to 22,800. These represent gross item counts, since some items could be carried in more than one of the ten issue points. The net item count as of 18 September was estimated at about 16,000. It was expected that this item reduction would level off about 9,000 items.

2. Supply Support to the FE. The Camp Butler FE draws his supply support from the following sources:

a. Issue Point 91--the Maintenance Materiel Shop Store;

b. Self-service store--Shop Store 01;

c. Local Purchase;

d. Customer Service--for not-in-stock and not-carried items;

e. Issue Point 88--for insurance items; and,

f. Issue Point 98--for BOMs.

3. Self-Service Store

a. Type of Materiel.

The Self-Service store, which is designated as Shop Store 01, provides administrative supplies, janitorial supplies, and carpenter and general mechanic hand tools. It does not stock repair parts.

Carried items were defined as expendable items with a low unit price, but no established definition for this could be identified; it was believed that the limit was probably $50. Items were required to be fast moving, with an average monthly demand of at least 1½ units. The stockage criteria was three demands in six months for initial stockage as well as for retention.

b. Authorized Stock Levels. The Self-Service store was authorized a 180-day operating level plus required acquisition leadtime, but was directed to drop to a 30-day operating level by the end of Fiscal Year 1976. However, a stock fund shortage prevented the carrying of the 180-day level, and the store is currently carrying a 30-day operating level. All assets carried in the Self-Service store are stocked in that store; no backup stocks are maintained in any other supply location.

c. Issue Procedure and Stock Replenishments. Customers draw materiel from the Self-Service store based on a Shopping List, which precisely identifies the materiel and quantity desired. A copy of this list is left with the store, and this serves as the basis for an input to the supply computer. Store balances are maintained in the computer on a line item basis, and the input from the Shopping List updates this inventory and, when appropriate, automatically produces a replenishment requirements.

d. Funding. Materiel in the Self-Service store is in the stock fund, and customers cite O&M funds when stocks are drawn.

e. Statistics. The Self-Service store contained about 1,200 to 1,300 line items; no dollar value information was available.

4. Issue Point 91

a. Type of Materiel. This issue point stocks materiel in support of the FE. The criteria for inclusion of items in this Issue Point coincide with those applicable to the Self-Service store:

low unit price, undefined; three demands in 180 days to stock and to retain in stockage; expendable; and, fast moving, defined as an average monthly demand of at least 1½ units.

b. Authorized Stock Level. Items in Issue Point 91 are authorized a six-month operating level plus acquisition leadtime, plus a safety level equal to half of the acquisition leadtime but not greater than 90 days stock.

c. Stock Replenishment. Stock balances are maintained in the DSSC computer, and each issue transaction triggers levels recomputation. The computer automatically produces a requisition or purchase request for item manager review, as required by the item's stock status. The computer makes stock replenishment computations on an individual issue point basis. Thus, for items carried in more than one issue point, there can be a long supply in one issue point and a reorder requisition from the computer for another point with the same item. A simultaneous buy-sell situation is prevented by the fact that all computer buy and excessing proposals are reviewed by the item manager before action is taken.

d. Funding. Issue Point 91 materiel is in the Marine Corps stock fund.

e. Issues. A materiel request, the DSSC Shopping List, is submitted to the issue point; unlike the Self-Service store, desired materiel is pulled by supply personnel. Materiel must be picked up by the customer--there is no delivery capability. Customers can call to the Issue point to determine stock availability, but they must carry their requisitions to the store.

f. Statistics. Issue Point 91 carried 1,458 line items, with an inventory value of $354,200.

5. Issue Point 88

a. Type of Materiel. This Issue Point carries insurance items only, as identified and justified by the requiring activities. This store supports all Camp Butler functions. An item listing showed this store held repair parts costing less than $1 and end items costting $2,000.

b. Authorized Levels. Stock levels in this Issue Point are based on customer requests, since this materiel is procured using customer funds.

c. Stock Replenishment. Replenishment action is taken by the DSSC as issues are made, to maintain the insurance item inventory at the level desired by the customer.

d. Funding. As stated above, materiel in this Issue Point is positioned based on customer requirements, and is paid for by customer funds when it is ordered. The DSSC is providing a service in holding and issuing this materiel which is not within the Marine Corps Stock Fund.

e. Issues. Currently, issues require the use of the "Materiel List" form, which provides for a signature of the requestor. Formerly, issues were made based on a telephone authorization from the owning organization.

f. Statistics. There were an estimated 130 line items included in Issue Point 88, with an inventory of $46,100.

6. Issue Point 98

a. Type of Materiel. This issue point carries materiel which is being held to support Job Orders; there is no restriction on the type of materiel which can be positioned in this Issue Point.

b. Positioning Stock

A computer program exists for the mechanized collection of materiel to support job orders. However, this program was not being used as of the time of the Study Team visit, and this materiel was being collected manually.

Materiel is withdrawn from regular stock and placed in Issue Point 98 to reserve it for job orders. The initial step is the submission of a Materiel List (Controlled Maintenance) to Issue Point 91. Materiel is pulled from Issue Point 91 stocks and sent to Issue Point 98. Required materiel which is not in stock at Issue Point 91 (whether or not carried) is annotated as not in stock on the Materiel List and forwarded to the DSSC item manager for action. After supply action has been taken by the item manager, a copy of the Materiel List, with the requisition/purchase number added for each missing item, is forwarded to Issue Point 98 as a form of due-in control.

As materiel is received at Issue Point 98, the Materiel List is annotated. When all materiel for a job has been received, Issue Point 98 advises Maintenance Scheduling in the FE.

c. Funding. Materiel in Issue Point 98 is intended to be procured using the Marine Corps stock fund, and is paid for by O&M funds when ordered out by the FE.

d. Statistics. As of 6 November 1975, Issue Point 98 was holding 21 incomplete and six complete BOMs. Complete BOMs had an inventory value of $15,500, while the incomplete BOMs had an on-hand inventory of $38,500 with $172,400 due in.

7. Customer Service

This source is used for items which are either not carried or are not in stock at the issue point. The customer must submit a Military Standard Requisitioning and Issue Procedures (MILSTRIP) requisition, which carries a job order number. This requisition is input to the computer, which produces a requisition to the inventory control point and establishes due-in and due-out records. (For items which are not carried, the computer maintains a record of demands for 12 months.) Status on these requisitions is received at Customer Service, which advises the customers.

Requests for local purchase of centrally procured items are also processed through Customer Service, and must be initiated by the requisitioner. It was estimated that about 15 to 20 requests for local purchase of CP items are received monthly.

D. MARINE CORPS BASE PROCUREMENT

1. Local Purchase Techniques.

a. Blanket Purchase Agreements are established by the P&C function with 88 vendors on Okinawa, and one with the Okinawa Regional Exchange. BPA purchases are made up to $500 without competition, and over $500 with competition. The P&C office has granted authority to the FE to make purchases under established BPAs.

b. Purchase Orders (PO) and Delivery Orders (DO) are used if a BPA has not been established; if Imprest Funds are not used; or if a written agreement between P&C and vendor is required or desired.

c. An Imprest Fund is used for purchases under $300 when a BPA has not been established with the vendor from whom the materiel are to be acquired.

d. Buy United States Here (BUSH) contracts are used when supplies can be immediately delivered from the local area. These contracts are mandatory when Delivery Requirements can be met and

when they are within the minimum and maximum limits of the contract. That is, to meet these minimum limits, the purchase must be large enough for the contractor to agree to provide the supplies. For the maximum limits the P&C function must insure that the maximum dollar limits established by the contract are not exceeded. This is done to insure a more equal distribution of Government purchases among contractors.

The P&C function may make purchases of foreign made supplies in accordance with Armed Service Procurement Regulations (ASPRs) up to $10,000. Purchases over $10,000 are referred to Marine Corps Headquarters for approval before making the transaction.

2. Local Procurement Costs.

a. Blanket Purchase Agreement. The authority granted to the FE by the P&C function is for BPA purchases under $500. These purchases are made against BPAs established by the P&C function. One person, a local national, spends all of his time in this task with the FE. Four other personnel are partially engaged in obtaining supplies locally. The number of personnel involved, the amount of time spent, and the annual salaries for the time spent are as follows:

| Number | Grade | % Time Spent | Salary For Time Spent |
|---|---|---|---|
| 1 | BWT-1-03 | 100% | $ 4,116 |
| 1 | BWT-1-04 | 20% | 961 |
| 1 | BWT-1-03 | 5% | 200 |
| 1 | WD-7 | 15% | 2,599 |
| 1 | WD-5 | 15% | 2,437 |
| Total Personnel Cost Within FE | | | $10,313 |

The amount spent for supplies purchased under BPAs by the FE was $92,919. The FE personnel cost to procure $1,000 worth of supplies was $110.99.

b. Purchase Orders/Delivery Orders.

Purchases made by the P&C function (those over $500, and those where no BPA is established) absorb 40% of the time of the following personnel.

| Number | Grade | % Time Spent | Salary For Time Spent |
|---|---|---|---|
| 1 | E-5 | 40% | $ 2,978 |
| 1 | E-3 | 40% | 2,117 |
| 1 | GS-5 | 40% | 4,047 |
| 3 | BWT-1-04 | 40% | 5,768 |
| Total Personnel Cost Within P&C | | | $14,910 |

The amount spent for supplies purchased by the P&C function for the FE was $1,137,521. The P&C personnel cost to procure $1,000 worth of FE supplies was $13.10.

The total amount spent for supplies locally purchased for the FE was:

| | |
|---|---|
| 92,919 | purchased by FE |
| $1,137,521 | purchased by P&C |
| $1,230,440 | TOTAL |

The total personnel cost for purchasing FE supplies was:

| |
|---|
| $10,313 |
| 14,910 |
| $25,223 |

The total personnel cost to procure $1,000 worth of FE supplies was $20.51.

The total dollar value of procurements of supplies and services made by the P&C office in Fiscal Year 1975 was $4,842,436. Of this amount, $1,230,440 was spent for FE support. Of the $1,230,440, the FE BPA clerk spent $92,919 for purchasing supplies.

$3,790,063 of the total procurements were transactions under $10,000. Of this amount $1,377,154 was expended in the CONUS, and $2,412,909 was expended on Okinawa. A sampling of 41 procurements made in CONUS showed that it took an average of 139.6 days to receive an item from the time it was ordered by the Civil Engineer. For items procured on Okinawa, it took an average of 8.4 days.

E. INDIVIDUAL ITEM RESEARCH

Nine items of supply which had not been received and were delaying the accomplishment of nine work orders were researched to determine reasons for delays. Results of research follows:

a. Work Order AA-6-M-M-2297-5152T was delayed for lack of four each 6210-V09-4049, Fixture, Floodlight. The item was requested by FE from P&C on 29 March 1974. The items were not ordered by P&C. According to NAVFAC Material Requisition (MRI) form on file in Facilities Engineering, the item is no longer handled by the company indicated as the source of supply. No other action has been taken to obtain the fixtures.

b. Work Order 11-5-M-M-2413-0051-T was delayed for lack of 5930-V01-4621, Plug, Electric. The item was ordered by FE from Installation Supply on 29 August 1974. The item was ordered by Installation Supply on 5 September 1974 (Requisition 4248-U003), but later cancelled by Installation Supply. No other action has been taken to obtain the plug.

c. Work Order AA-5-M-M-2414-0051T was delayed for lack of 6120-V09-4066, Transformer, 45 kilowatt. The item was ordered by FE from Installation Supply on 30 August 1974. The item was ordered by Installation Supply on 5 September 1974 (Requisition 4248-M076). The latest status indicated delivery was to be made on 1 September 1975, but as of 6 November 1975, the item had not been received.

d. Work Order AA-6-M-M-2451-0041 was delayed for lack of 5656-00-171-4707, Roofing Felt. The item was ordered by FE from Installation Supply on 20 November 1974. The item was ordered by Installation Supply on 17 December 1974 (Requisition 4351-U007), but later cancelled by Installation Supply. No other action has been taken to obtain the felt.

e. Work Order AA-5-M-M-2451-0061 was delayed for lack of 4510-00-V00-8025, Commode. The item was ordered by FE from Installation Supply on 20 November 1974. Installation Supply ordered the item on 17 December 1974 (Requisition 4351-U014). The item was cancelled on 13 March 1975 because the vendor could not furnish the commode. No further action was indicated as being taken to obtain the item.

f. Work Order AA-5-M-M-2471-0041-T was delayed for lack of 5640-00-V01-7001, Glass, Wire reinforced. The item was ordered by FE from Installation Supply on 10 December 1974. Installation Supply

ordered the item on 30 December 1974 (Requisition 4364-U009). Stock number was changed to 5620-V01-7001 and item was reordered on 18 February 1975 (Requisition 5049-U001). No other status information was available.

g. Work Order AA-5-M-M-2471-0061T was delayed for lack of 4710-00-202-8207, Pipe, Galvanized steel. The item was ordered by FE from Installation Supply on 10 December 1974. Installation Supply ordered the item 12 December 1974 (Requisition 4346-M061) from General Services Administration (GSA). Follow-up action has been initiated, but no status has been received.

h. Work Order AA-5-M-M-2493-0043T was delayed for lack of 8010-00-082-2420, Bead, Reflective, glass. The item was ordered by FE from Installation Supply 20 January 1975. Installation Supply ordered from GSA on 23 January 1975 (Requisition 5023-M060). Status from GSA indicated item was shipped in September 1975; however, item had not been received as of 6 November 1975.

i. Work Order AA-5-M-M-2543-0063T was delayed for lack of 9515-00-229-0196, Steel Plate. The item was ordered by FE from Installation Supply 17 April 1975. The item was ordered by Installation Supply on 29 April 1975. The latest status indicated item was not ordered from the CONUS because of a lack of acquisition authority in the stock fund.

# PART B

# STATISTICAL DATA



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## STATISTICAL DATA

### A. GENERAL

The data call was established to collect information which would provide a basis for a comparison, in terms of relative cost and responsiveness, of the different techniques for providing supply support to the civil engineering function within the Department of Defense (DoD).

Appendix B contains a copy of the data call which was issued for this Study; the specific data requested may be determined by review of that appendix. In general terms the data to be submitted was as follows:

a. Summary information on civil engineering materiel expenditures and inventory by Military Service. Requirements are detailed in Enclosure 1 to the data call.

b. Data on current and past Contractor Operated Civil Engineer Supply Store (COCESS) contracts. Requirements are detailed in Enclosure 2 to the data call.

c. Selected summary statistics applicable to the three long-standing Air Force local purchase-only COCESS activities. Requirements are detailed in Enclosure 3 to the data call.

d. Individual transaction data on receipts of materiel to support civil engineer operations. Requirements are detailed in Enclosure 4 to the data call.

e. Summary and individual line item data on local purchase (LP) actions to support civil engineer operations. Requirements are detailed in Enclosure 5 to the data call.

Data for Enclosure 1 of the data call was requested from each Military Service and was to be submitted by the appropriate Service Headquarters as summary figures. The Air Force requested that each Air Force installation submit the required data directly to the Study Team, and this resulted in the receipt of 114 separate submittals to complete the Air Force portion of the Service Summary Data. Data for Enclosure 2 of the data call was collected from all 45 Air Force installations with an operating COCESS at the time of the call. Data for Enclosure 3 of the data call was collected from three Air Force Bases with long established LP-only



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COCESS operations. Data for Enclosure 4 of the data call was collected from the installations visited during the field research effort, plus other installations selected on the basis of their technique for providing civil engineering supply support; a total of 30 installations submitted this data. Data for Enclosure 5 of the data call was collected from five Air Force Bases with newly established LP-only COCESS contracts. A list of these installations and the appropriate enclosures for which data was to be submitted is contained in Appendix C. As a result of the field research performed in Germany, Baumholder Army Depot was deleted from the submitting activities and the Community Commands at Stuttgart and Frankfurt were requested to submit receipt data.

## B. DATA PREPARATION

### 1. Introduction

Data submittals were received in two different manners. Service Summary Data, COCESS Historical Data, Summary Data for long-standing LP-only COCESS Operations and Summary Data for new LP-only COCESS Operations were submitted by correspondence. Receipt and Demand Data were submitted in computerized card format via Automatic Digital Network (AUTODIN). In order to insure that the data received was error free, accurate, and representative, editing was performed on all data.

The editing performed on the correspondence data was basically visual, with any questions or verifications accomplished by the telephone for Continental United States activities or by message for overseas activities. The data was visually checked to insure that it was complete and consistent with other submittals.

The bulk of the data was submitted in computerized format, and was subjected to a number of edits to insure its validity prior to computer analysis. The balance of this paragraph describes the edits applied to this computerized data. Paragraph 2 describes the edits which the submitting activities were requested to accomplish before transmitting their data; remaining edits described below were accomplished by the Study Team after receipt of the data from the Military Services.

### 2. Submitting Activity Editing

The data call itself requested each submitting activity to perform specific mechanical and substantive validation checks before transmission of the data. The specific criteria were provided in Enclosures 4 and 5 of the data call.

In summary, the submitting activities were asked to accomplish the following:

(1) Mechanical Editing: This involved a review of all fields in each data record to insure the correct format and internal consistency of each record. Mechanical editing included such checks as insuring that fields requiring quantities contained only numeric data, that a field containing the National Stock Number (NSN) contained only numeric data, and that a field identifying the actual source from which materiel was obtained contained one of the authorized codes provided in the data call for that purpose.

(2) Substantive Editing: This required review action by knowledgeable personnel at the submitting activities, since this was aimed at identifying more subtle error conditions. Examples of the types of actions intended to be included in this substantive editing included: summarizing the number and total dollar value of receipts by source, and examining these to determine if they appear reasonable; examining all records which show that the materiel was ordered/requested earlier than 1976, and confirming that the date shown in the record is correct; examining all records involving an item with a unit price shown as $1,000 or greater, and verifying the validity of that price; and, examining all records involving items with a receipt quantity shown as 10,000 or more, and verifying the validity of that quantity.

3. Mechanical Editing

The mechanical editing by the Study Team was essentially the same as that which the submitting activities were directed to accomplish before forwarding their data. Nevertheless, substantial error conditions were identified, and the data on this is shown in Table B-1.

Examination of this data shows that seven installations had error rates of over 40%. Eventually one of these installations (Pease Air Force Base) was deleted from the data call due to the number of records that required individual research and resubmittal.

Virtually all mechanical error records from all other installations were successfully corrected.

Table B-1

| MECHANICAL EDIT RESULTS | | | |
|---|---|---|---|
| Submitting Activity | Total Submitted | No. of Errors | Percent in Error |
| Fort Bragg | 1,984 | 28 | 1.4% |
| New Cumberland Army Depot | 911 | 19 | 2.1 |
| Community Command, Frankfurt | 1,978 | 25 | 1.3 |
| Community Command, Kaiserslautern | 8,453 | 990 | 11.7 |
| Okinawa (USAGO) | 1,958 | 22 | 1.1 |
| Fort Sill | 6,840 | 5,752 | 84.1 |
| Community Command, Stuttgart | 1,207 | 643 | 53.3 |
| Army Summary | 23,331 | 7,479 | 32.1% |
| Guam (PWC) | 930 | 219 | 23.5% |
| PWC Norfolk | 2,850 | 132 | 4.6 |
| PWD Norfolk | 634 | 116 | 18.3 |
| Navy Summary | 4,414 | 467 | 10.6% |
| Andersen AFB | 5,554 | 17 | 0.3% |
| Carswell AFB | 1,921 | 275 | 14.3 |
| Cannon AFB | 4,969 | 2,240 | 45.1 |
| Dover AFB | 2,998 | 472 | 15.7 |
| Hahn AB | 4,288 | 856 | 20.0 |
| Holloman AFB | 3,669 | 673 | 18.3 |
| Hurlburt Field | 4,172 | 885 | 21.2 |
| Kadena AB | 7,457 | 978 | 13.1 |
| Luke AFB | 4,460 | 1,993 | 44.7 |
| March AFB | 5,618 | 818 | 14.6 |
| Offutt AFB | 5,219 | 4,347 | 83.3 |
| Hill AFB | 2,414 | 1,036 | 42.9 |
| Pease AFB | 2,735 | 1,230 | 45.0 |
| Ramstein AB | 8,500 | 854 | 10.0 |
| Rhein Main AB | 4,585 | 776 | 16.9 |
| Brooks AFB | 3,221 | 452 | 14.0 |
| Seymour-Johnson AFB | 3,427 | 516 | 15.1 |
| Shaw AFB | 4,711 | 958 | 20.3 |
| Air Force Summary | 79,918 | 19,376 | 24.2% |
| Camp Butler | 570 | 16 | 2.8% |
| Camp Lejuene | 14,514 | 65 | 0.4 |
| Marine Corps Summary | 15,084 | 81 | 0.5% |
| DoD Summary | 122,747 | 27,403 | 22.3% |

4. Impact of COCESS Transactions

The mechanical editing process resulted in computer printouts of erroneous records. During the course of reviewing these printouts it was noted that virtually no transactions involving receipts from COCESS contained meaningful item identifying numbers (either NSNs or Manufacturers' Reference Numbers--MRNs). The total file of COCESS records was reviewed, and this absence of item identifying numbers was discovered to exist throughout the file.

An essential element of the Study Team analysis involved a comparison of the relative cost of materiel when acquired from a COCESS, and when acquired from another source--an Inventory Control Point (ICP) or from LP. However, it was essential in such an analysis that the cost comparison be based on identical items with identical units of issue. It became apparent that this type of analysis was impossible with the minute number of COCESS transactions submitted with meaningful Item Identifying Numbers.

Field research and discussions with Air Force Headquarters personnel indicated that meaningful numbers were available and an additional collection of COCESS transactions from six selected Air Force installations was established. These installations were contacted by telephone, informed of the existing situation and notified of the additional data requirement. In addition, a letter including supplemental instructions was sent to each installation involved. A copy of the letter sent to the SAC and TAC bases involved is enclosed as Appendices D and E, respectively.

5. Exception Data Review. Data call instructions authorized submitting activities to identify three special situations and provided special codes to identify these: when a data requirement was not applicable to an activity; when a data requirement was applicable, but the required data was not available; and, when a data element (unit price or quantity) was greater than the space provided in the data record. Records containing any of these three conditions were manually reviewed to confirm the validity of the nonavailability or nonapplicability coding, and to manually insert the required price or quantity. Only a very few error conditions were identified and corrected by this editing process. However, this edit did identify one significant factor which could not be corrected: most of the transaction data submitted by the Norfolk Naval Shipyard did not contain meaningful dates, and this activity was omitted from any responsiveness analyses.

6. High Dollar Value Review. Records with an extended dollar value (unit price times the quantity received) over $2,500 were

identified by the computer and produced for manual review. This review identified such error conditions as the following: transaction data on bulk fuels and on end items of equipment (e.g., fire trucks), commodities which were excluded from the Study and were to have been excluded from data submissions; and, an installation which submitted COCESS transactions with the extended dollar value of the transaction (quantity times unit price) in the unit price field. Transactions with the first type of error were omitted from the data analyses, and those with the latter type of error were corrected.

7. Unit of Issue Edit

As discussed above, a comparison of relative cost and responsiveness by different supply sources (COCESS versus other sources) for identical items was an essential element of the analyses of this Study. Since these analyses were done to be using computer programs, it was necessary to insure that the unit of issue for all transactions with the same item identifying number was the same, and that all such transactions did, in fact, represent the same item of supply. Accordingly, a computer program was developed which would do the following for groups of transactions carrying the same item identifying number (NSN or MRN) and having at least one transaction acquired through a COCESS:

(1) Compare the reported units of issue for all transactions within the group, and output for manual review all groups of items which were reported in terms of more than one unit of issue.

(2) For groups of items with identical units of issue, develop an average unit price--the sum of the prices charged for each transaction divided by the number of transactions, ignoring the quantity field. Compare the reported price for each transaction with this "average" price, and output for manual review all groups of items for which one or more transactions have a unit price which is more than 20% (an arbitrary figure) greater or less than the "average" price.

This computer program identified a large number of groups of transactions for manual review, and this review quickly established that questionable records existed, and that these were primarily COCESS transactions from either Carswell or March Air Force Bases:

(1) March Air Force Base

As an initial effort, the descriptions of 12 items were developed from DoD and General Services Administration

(GSA) catalogs, and March Air Force Base was asked to furnish the description of the items which were being received from the COCESS. This process established that, in two of 12 cases, the item furnished by the COCESS was not the same item of supply covered by the NSN--one case involved a 40% tin solder received by other activities at prices ranging from $2.10 to $2.44 per pound, while the COCESS was furnishing silver solder, under the same NSN, at $11.39 per pound; the second case involved a spud gasket furnished at 15¢ to 20¢ each to a number of DoD activites, while the COCESS was providing an apparently different item to March Air Force Base at $5.88. In the remaining ten cases, the items described in various United States Government catalogs and the items being provided by the COCESS to March Air Force Base appeared to be the same item of supply, even though there were such price differences as a 250-foot coil of 12-gauge, triple conductor electric wire, being furnished to a number of activities at $68 per coil, but received by March Air Force Base from its COCESS at $198.25 per coil.

Since it was difficult to conclusively establish the identity and exact characteristics of items by telephone, four additional items were examined, each of which had the common characteristic of having been received by March Air Force Base at two significantly different prices: a splicing kit received at $6.42 and $10.60, was identified by March Air Force Base as actually being two different kits which are carried in COCESS records under a single NSN; paint was received at $6.94 and $9.35 per gallon, and examination indicated that the $9.35 receipt was apparently an erroneous recording of the undiscounted price; a "junction box" was received at 92¢ each, while a "fuse cutout" was received under the same NSN at $33.62, with research showing that the NSN actually covered the 92¢ item and the $33.62 item was apparently erroneously reported since it is listed without an NSN below the 92¢ item in the March Air Force Base Material Requirements List (MRL); and, finally, steel hinges were received at 55¢ and $8.09 a pair, with research establishing that the NSN actually applied to the 55¢ hinge and that the error apparently occurred because the two items were listed below each other in the MRL, and differed from each other in only one position in the MRL number and in the NSN.

The computer program identified a total of 923 March Air Force Base COCESS transactions for manual review based on the criteria identified above. Further review showed that for 547 of these receipts, the March Air Force Base COCESS price was over twice as high as the average price charged for all items

in the group of receipts reported with the same item identifying number (keeping in mind that this high March Air Force Base price also served to increase the average price for the group of receipts), while for the remaining 376 items the March Air Force Base price was merely between 20% and 100% higher.

(2) Carswell Air Force Base

Discussions as a result of the computer identification of Carswell Air Force Base COCESS items for manual review established a basic potential weakness in the data submittal. It was established that the NSN under which receipt information was submitted was obtained by matching a description of the item received with the closest item description in the COCESS MRL or in the GSA catalog--thus, the data was submitted under an NSN which was not necessarily that of the item which was actually received.

As a result of this process, any checking of item descriptions would be fruitless, since they would always match regardless of the actual item received, and this proved to be the case for seven items which were initially reviewed with Carswell Air Force Base. A second phenomenon appeared as a result of the Carswell Air Force Base process for assigning NSNs to their data submittal--the Study Team query almost invariably (for six of the seven items) resulted in a price change. This occurred since the original transaction was reported with the actual price paid for the actual item received, but with some approximately-correct NSN; any examination in terms of the NSN would confirm the NSN description, but could only identify the COCESS MRL price for that NSN and not the price of the actual item received.

Carswell Air Force Base was asked to examine six additional items for which there was a wide discrepancy between the COCESS price and the price paid by other activities to other sources of supply. In every case queried a change in the transaction record was made: flexible conduit was received at $22.79 per foot, while other activities reported receipts at 17¢ per foot, and examination showed this to be the wrong NSN, with a price change to 23¢ per foot; copper tubing was received at $7.80 a length, while other activities reported the same NSN as an adapter or fitting at $1 each, and further research indicated the nomenclature, unit of issue, and price to be correct for a different NSN; conduit was received at $100.70 per foot while other activities reported receipts at 33¢ a foot, and examination

showed that the price represented a 100-foot coil, which reduced the price to $1 per foot; copper wire was received at $15.37 per foot while other activities reported receipts at prices ranging from $35 to $50.80 per coil, and examination showed that this price represented a 100-foot coil; and, conduit was received at $23.85 per foot and $17 per coil while other activities reported receipts at $12.60 per coil, and examination showed that the price should be 23¢ per foot. During the first series of queries, Carswell Air Force Base advised that one item submitted at $13.25 per foot should be changed to a different NSN, at 13¢ per foot; the Study Team asked for an explanation of these changes and the cause of the error, and further research by Carswell Air Force Base resulted in confirmation of the price change, but reversal of the NSN change to the original NSN.

The computer program identified a total of 156 Carswell Air Force Base receipt transactions for manual review based on the criteria identified above. Of these, 68 receipts showed unit prices which were over twice as high as the average price charged for all items in the group of receipts reported with the same item identifying number.

The results of the individual item research accomplished with March and Carswell Air Force Bases clearly showed that there were significant errors in the data. The volume of receipt transactions identified by the computer as being potentially in error was far too great to be individually researched by personnel at March and Carswell Air Force Bases and individually corrected by the Study Team. Accordingly, the Study Team, after consultation with Air Force personnel, determined that this data was unusable for any analyses involving costs or cost comparisons. Receipt transaction data involving items coded for central procurement but authorized to be obtained through a COCESS was only collected by the Study Team from these two installations. Accordingly no COCESS versus CP price comparisons based on receipt data was used in this Report.

8. Defense Logistics Service Center (DLSC) Screening

a. Description of Screening Process:

Receipt transactions and demand data were identified by the submitting installations with an NSN, MRN, or, if neither of these were available, a nonitem identifying code was used (locally assigned stock numbers were not to be submitted since they would be meaningless to the Study Team). All receipt and

demand data transactions identified by an MRN were screened against DLSC cross-reference files to determine if an NSN had been assigned. If an NSN had been assigned, the MRN was replaced with the NSN.

NSNs which did not have a DoD ICP as the authorized source were screened against the DLSC file to determine if any of these items were identified for central management and procurement. All transactions for items that were identified as being centrally procured had the central procurement unit of issue and unit price inserted in the record. In addition, those transactions that did not reflect COCESS or Government Operated Civil Engineer Supply Store (GOCESS) as the authorized source had the central manager inserted in the record as the authorized source.

b. Screening for NSNs. The screening of MRNs against the DLSC cross-reference file resulted in identification of NSNs for 384 different items, representing 393 transactions. The relationship between the number of transactions actually changed compared with the total submission is shown by Military Service in Table B-2. All of the MRNs changed in the Army were transactions submitted by the United States Army Garrison, Okinawa, and these represent 5.3% of its total submission; all MRNs changed in the Navy were transactions from Public Works Center, Norfolk, and these represent 4.7% of its total submission.

c. Screening for Authorized Source. The results of the screening to identify items which should have been identified as authorized to be obtained from an ICP, but which were actually identified to some other authorized source are shown in Table B-3.

9. Examination of Responsiveness Data

A series of analyses of the responsiveness data contained in the transaction records was developed, to assist in the system comparisons contained in Volume I of this Report.

Table B-2

| SUMMARY STATISTICS: MRNs CHANGED TO NSNs | | | | | |
|---|---|---|---|---|---|
| | Army | Navy | Air Force | Marine Corps | Total |
| Number submitted | 673 | 1,043 | 9,203 | 0 | 10,919 |
| Number changed | 104 | 134 | 155 | 0 | 393 |
| Percent changed | 15.5 | 12.8 | 1.7 | 0.0 | 3.6 |

Table B-3

AUTHORIZED SOURCE CHANGED
TO AN INVENTORY CONTROL POINT

| Changed From | Items Submitted As | | Total | |
|---|---|---|---|---|
| | MRN | NSN | # | % |
| COCESS | 77 | 1,367 | 1,444 | 35.1% |
| Local Purchase | 98 | 1,062 | 1,160 | 28.2 |
| GOCESS | 1 | 910 | 911 | 22.2 |
| Other | 4 | 593 | 597 | 14.5 |
| Total | 180 | 3,932 | 4,112 | 100.0% |

The extraordinary data revealed by some of these analyses raised questions about the validity of the submitted data. For example, this data showed that the following portions of the total receipts of local purchase materiel were received within one day:

(1) An Army Forces Command activity: 5.7%

(2) An Army Materiel Development and Readiness Command activity: 0.1%

(3) A Navy Public Works Center: 16.6%

(4) An Air Force Customer Integrated Automatic Procurement System (CIAPS) Base: 30.5%

(5) An Air Force LP-only COCESS base: 0.6%

(6) Another Air Force LP-only COCESS base: 63.5%

(7) The Offutt Air Force Base GOCESS: 96.7%

(8) A Marine Corps activity: 96.5%

The surprising values shown for some of the activities were suspect, and in some cases did not coincide with what could be expected of these activities/systems based on information and data obtained during field research. As a result, efforts were made to confirm the contents of the data submission insofar as it pertained to responsiveness. This effort revealed the following:

(1) The responsiveness data was intended to include all receipts during the 60-day data collection period, and each

receipt was to be identified as to the actual source from which the item was obtained (e.g., local purchase, ICP shipment, or available from on-hand stocks) and the source from which it was authorized to be obtained. Three activities advised that, since they could not identify which issues from stock were LP and which were CP items, no issues from stock were reported. This produced an artificially low response rate.

(2) One activity advised that it was unable to identify the date on which the requirement was established for those items which were ordered to meet customer requests. For all such receipts, the issue date was also submitted as the requirement date, and this produced an artificially high response rate.

Further examination raised questions about the accuracy of the data which was submitted, even though it was confirmed by the submitting activities. For example, one activity confirmed that it had included receipts by the civil engineer from both on-hand stocks and from purchase action in its responsiveness data on LP items; despite this, its overall responsiveness was significantly poorer than that of several activities which limited their responsiveness data to purchased items only and included no receipts from on-hand stocks. Another example pertains to COCESS responsiveness: one activity reported a first day fill rate from its COCESS of 0.6% of its receipts, and another reported a first day fill rate of 3.4%, with both activities confirming the validity of their submission; this level of responsiveness is not only completely incompatible with that of the other reporting COCESS activities (the next lowest activity reported a first day fill rate of 21% of its receipts), it is incompatible with the requirements of the COCESS contracts at these activities.

This examination of the responsiveness data submitted in response to the Study data call established the incompatibility of the information contained in the Study data bank, and this incompatibility prevented the use of this information to evaluate the relative responsiveness of the systems supporting these activities.

## C. DATA PRESENTATION

### 1. Introduction

This Paragraph presents the actual statistical data submitted by the Military Services. Figure B-1 explains the abbreviations used in these computer printouts to describe the type of summary data.

DATA ANALYSES ABBREVIATIONS

| Summary | Abbreviation |
|---|---|
| Army Summary | ARMSUM |
| Army CONUS Summary | ARMCOM |
| Army Germany Summary | ARMGER |
| Navy Summary | NAVSUM |
| Navy CONUS Summary | NAVCON |
| Air Force Summary | AIRSUM |
| Air Force CONUS Summary | AIRCON |
| Air Force Germany Summary | AIRGER |
| Air Force Full COCESS Summary | AIRCOC |
| Air Force LP COCESS Summary | AIRLPC |
| Air Force New LP COCESS Summary | AIRNCO |
| Marine Corps Summary | MARCOR |
| Total CONUS Summary | TOTCON |
| Total Germany Summary | GERSUM |
| Total Okinawa Summary | OKISUM |
| Total Guam Summary | GUMSUM |
| DoD Summary | DODSUM |

Figure B-1

The totals in the tables in this Paragraph may not always add due to rounding.

2. Service Summary Data (Enclosure 1 data).

Table B-4 gives total Fiscal Year 1975 expenditures by Military Service.

Table B-4

TOTAL FISCAL YEAR 1975 EXPENDITURES BY SERVICE

| Service | Amount | Percent |
|---|---|---|
| Army | $103,425,308 | 30.3% |
| Navy | 94,800,000 | 27.8 |
| Air Force | 133,811,211 | 39.2 |
| Marine Corps | 9,294,877 | 2.7 |
| Total | $341,331,396 | 100.0% |

Data on Fiscal Year 1975 expenditures were requested in terms of source of supply. Only the Army and the Marine Corps provided this information as requested, and this is shown in Table B-5.

Table B-5

FISCAL YEAR 1975 EXPENDITURE DATA--AIR FORCE AND MARINE CORPS

| Source | Army | Marine Corps |
|---|---|---|
| DoD ICPs | | |
| DCSC | $ 3,296,138 | $ 821,856 |
| DGSC | 609,521 | 377,269 |
| DESC | 256,794 | 79,133 |
| DISC | 250,623 | 276,018 |
| DPSC | 0 | 11,905 |
| Other | | 223,432 |
| Unknown | 16,238,919 | |
| Local Purchase | | |
| BPA | 26,419,106 | 658,731 |
| Other | 42,324,376 | 5,120,706 |
| GSA | | |
| Federal Supply Schedule | 4,534,725 | 97,769 |
| Stores Depot | 9,131,725 | 288,584 |
| COCESS/COFESS | 363,381 | 0 |
| All Other | 0 | 1,339,474 |
| Total | $103,425,308 | $9,294,877 |

Navy and Air Force expenditure data were provided in the detail shown in Tables B-6 and B-7 respectively.

Table B-6

EXPENDITURE DATA--NAVY

| | |
|---|---|
| Public Works Departments | $56,600,000 |
| Public Works Centers | 38,200,000 |
| Total | $94,800,000 |

Table B-7

EXPENDITURE DATA--AIR FORCE

| | COCESS | All Other | Total |
|---|---|---|---|
| Full COCESS | $ 7,554,600 | $ 4,159,082 | $ 11,713,682 |
| Partial COCESS | 8,673,793 | 4,599,409 | 13,273,202 |
| LP COCESS | 1,765,125 | 1,896,544 | 3,661,669 |
| No COCESS* | | 105,162,657 | $105,162,657 |
| Total | $17,993,518 | $115,817,693 | $133,811,211 |

*Includes the GOCESS at Offutt Air Force Base

Table B-8 tabulates on-hand inventory by holding authority (BCE and base supply) for each Service, and for certain supply systems within the Navy and Air Force.

Table B-8

ON-HAND INVENTORY DATA

| Service Breakout | Specific Projects * | General Facilities ** | Total |
|---|---|---|---|
| Army Total | $ 3,034,513 | $32,506,521 | $35,541,034 |
| Navy: | | | |
| PWD | 2,900,000 | 11,100,000 | 14,000,000 |
| PWC | 4,600,000 | 8,200,000 | 12,800,000 |
| Total | 7,500,000 | 19,300,000 | 26,800,000 |
| Air Force: | | | |
| Full COCESS | 1,704,647 | 127,014 | 1,831,661 |
| Partial COCESS | 1,917,990 | 173,130 | 2,091,120 |
| LP-only COCESS | 441,374 | 32,040 | 473,414 |
| GOCESS | 139,243 | 1,228 | 140,471 |
| No COCESS | 23,733,599 | 7,602,670 | 31,336,269 |
| Total | 27,936,854 | 7,936,082 | 35,872,935 |
| Marine Corps Total | 431,379 | 909,725 | 1,341,104 |
| Total All Services | $38,902,746 | $60,652,328 | $99,555,073 |

* This dollar value is materials owned by the CE.
** This dollar value is materials owned by Base Supply

3. Summary Data on Long Standing LP-Only COCESS Operations (Enclosure 3 data).

Data was submitted by three Air Force Bases--Luke, Hill, and Brooks--which have had LP-only COCESS operations for some time. Table B-9 shows Fiscal Year 1975 expenditures by source of supply, and Table B-10 shows the value of inventory held by the Base Civil Engineer, by the source from which that materiel was obtained.

Table B-9

FISCAL YEAR 1975 EXPENDITURES FOR CIVIL ENGINEER MATERIALS

| | Luke AFB | Hill AFB | Brooks AFB |
|---|---|---|---|
| DoD ICP | | $473,930 | $ 97,191 |
| LP | | 629,826 | 0 |
| GSA Schedule | | 63,153 | Incl w/ICP |
| GSA Store | | 0 | Incl w/ICP |
| COCESS | $673,602 | 843,500 | $248,023 |
| Other | 568,055 | 64,389 | 0 |
| Total | $1,241,657 | $2,074,798 | $345,214 |

Table B-10

VALUE OF INVENTORY

| Inventory Held by BCE | Luke AFB | Hill AFB | Brooks AFB |
|---|---|---|---|
| Source--COCESS | $132,377 | $100,000 | $40,293 |
| Source--DoD ICP | 35,300 | 63,800 | 18,615 |
| Other Sources | 8,824 | 10,800 | 0 |
| Sub-total | 176,501 | 174,600 | 58,908 |
| Inventory of CE Mat'l held by Base | $ 17,821 | Not Available | $14,219 |
| Total | $194,322 | $174,600 | $73,127 |

In addition, each of these bases was asked to identify the 100 "best sellers" which they had obtained the previous year from DoD ICPs, to determine from their COCESS contractors what he would charge for those items, and develop the total cost for those items at the ICP prices and at the COCESS prices. The results of that examination are shown in Table B-11.

Table B-11

FISCAL YEAR 1975 "BEST SELLERS"

| | Luke AFB | Hill AFB | Brooks AFB |
|---|---|---|---|
| At FY 1975 ICP Price | $22,731.89 | $23,916.64 | $17,700.07 |
| At Est COCESS Price | $25,565.73 | $30,162.68 | $17,813.76 |

4. Receipt Data (Enclosure 4 data).

Individual transaction data covering 60 days of receipts of materiel by the civil engineer was submitted by the Military Service activities identified in Appendix C. The following series of tables present the data developed from these transactions.

Table B-12 shows total receipts by Type Item Identifier. This data is shown in terms of both numbers of receipts and their dollar value for items identified by an NSN, items identified by an MRN and items not identified by either an NSN or MRN.

Table B-12

RECEIPTS BY TYPE ITEM IDENTIFIER

| TYPE SUMMARY | TOTAL NO RCDS | TOTAL $ VALUE | NO. NSN | NSN $ VALUE | NO. MRN | MRN $ VALVE | NO. OTHER | OTHER $ VALUE |
|---|---|---|---|---|---|---|---|---|
| ARMSUM | 23,248 | 2,462,552 | 5,358 | 620,737 | 569 | 74,359 | 17,321 | 1,767,463 |
| ARMCON | 9,734 | 1,525,832 | 1,618 | 325,341 | 189 | 25,270 | 7,897 | 1,175,219 |
| ARMGER | 11,596 | 564,345 | 2,463 | 120,920 | 46 | 1,663 | 9,088 | 441,782 |
| NAVSUM | 4,918 | 696,940 | 1,905 | 140,655 | 909 | 145,691 | 2,096 | 410,594 |
| NAVCON | 3,979 | 529,207 | 1,551 | 116,578 | 774 | 81,818 | 1,654 | 330,619 |
| AIRSUM | 75,237 | 5,627,974 | 46,539 | 2,858,648 | 9,048 | 1,102,713 | 19,650 | 1,646,613 |
| AIRCON | 45,296 | 3,237,615 | 28,121 | 1,362,184 | 4,613 | 615,749 | 12,562 | 1,259,682 |
| AIRGER | 16,968 | 1,037,588 | 6,813 | 540,457 | 3,368 | 211,242 | 6,787 | 285,889 |
| AIRCOC | 7,475 | 692,196 | 3,280 | 229,809 | 1,606 | 160,965 | 2,589 | 301,422 |
| AIRLPC | 9,866 | 699,454 | 6,755 | 264,258 | 111 | 32,235 | 3,000 | 402,961 |
| AIRNCO | 19,824 | 1,503,364 | 13,481 | 661,901 | 2,333 | 359,375 | 4,010 | 452,288 |
| MARCOR | 15,792 | 758,457 | 10,211 | 217,685 | 0 | 0 | 4,871 | 540,772 |
| TOTCON | 73,432 | 6,723,862 | 41,501 | 2,021,783 | 5,576 | 722,529 | 26,415 | 3,278,445 |
| GERSUM | 28,554 | 1,631,933 | 9,273 | 661,357 | 3,414 | 212,905 | 15,867 | 727,671 |
| OKISUM | 9,947 | 1,197,604 | 8,264 | 827,967 | 685 | 172,772 | 998 | 196,865 |
| GUMSUM | 6,484 | 723,324 | 4,975 | 326,626 | 851 | 214,257 | 658 | 162,461 |
| DODSUM | 118,477 | 9,525,923 | 64,013 | 3,837,718 | 10,526 | 1,322,763 | 43,938 | 4,365,442 |

Tables B-13 through B-17 give transaction cost analyses by supply source. This data is shown in terms of both number and dollar value of receipts for all actual sources of supply within appropriate transaction cost intervals. The abbreviations of sources are explained in Enclosure 4 to the data call, shown in Appendix B. Table B-13 shows Army data only. Table B-14 shows Navy data only. Table B-15 shows Air Force data only. Table B-16 shows Marine Corps data only. Table B-17 is a DoD Summary and contains data from all Services.

Table B-13

ARMY SUMMARY

TRANSACTION COST ANALYSIS BY SUPPLY SOURCE

TRANSACTION COST INTERVALS

| ACT SRC | $ 0.01-10.00 # RECORDS $ VALUE | $ 10.01-25.00 # RECORDS $ VALUE | $ 25.01-50.00 # RECORDS $ VALUE | $ 50.01-100.00 # RECORDS $ VALUE | $ 100.01-500.00 # RECORDS $ VALUE | $ 500.01-2500.00 # RECORDS $ VALUE | $ 2500.01-5000.00 # RECORDS $ VALUE | $ 5000.01-10000.00 # RECORDS $ VALUE | OVER $ 10000.00 # RECORDS $ VALUE | TOTAL # RECORDS $ VALUE |
|---|---|---|---|---|---|---|---|---|---|---|
| COC | 0 | 0 | 2 | 1 | 3 | 0 | 0 | 0 | 0 | 0 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 |
| GOC | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 |
| LOC STK | 5,161 | 1,889 | 738 | 354 | 344 | 71 | 7 | 2 | 1 | 8,567 |
| | $ 19,692 | $ 29,839 | $ 25,133 | $ 24,619 | $ 74,739 | $ 70,916 | $ 24,627 | $ 16,019 | $ 25,095 | $ 309,970 |
| TCP STK | 532 | 205 | 90 | 59 | 40 | 2 | 1 | 0 | 0 | 930 |
| | $ 1,647 | $ 3,112 | $ 3,165 | $ 4,124 | $ 7,821 | $ 2,361 | $ 3,735 | $ 0 | $ 0 | $ 25,965 |
| OTH STK | 1,348 | 546 | 242 | 169 | 128 | 22 | 7 | 0 | 1 | 2,463 |
| | $ 5,673 | $ 8,698 | $ 8,823 | $ 11,746 | $ 23,981 | $ 21,929 | $ 23,689 | $ 0 | $ 16,550 | $ 120,989 |
| LOC | 2,197 | 1,680 | 1,333 | 1,219 | 1,654 | 388 | 40 | 12 | 9 | 8,502 |
| | $ 10,653 | $ 27,957 | $ 47,239 | $ 88,279 | $ 353,551 | $ 375,184 | $ 135,574 | $ 92,183 | $ 227,435 | $ 1,357,047 |
| LOD | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| | $ 0 | $ 0 | $ 0 | $ 1 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 |
| SOC | 248 | 158 | 122 | 76 | 79 | 36 | 9 | 1 | 2 | 731 |
| | $ 1,217 | $ 2,490 | $ 4,401 | $ 5,312 | $ 15,782 | $ 38,227 | $ 27,748 | $ 5,106 | $ 54,292 | $ 154,567 |
| SOC | 28 | 23 | 17 | 6 | 7 | 1 | 0 | 0 | 0 | 74 |
| | $ 81 | $ 406 | $ 611 | $ 477 | $ 1,623 | $ 1,024 | $ 0 | $ 0 | $ 0 | $ 4,222 |
| SOG | 37 | 60 | 28 | 48 | 50 | 16 | 1 | 1 | 0 | 250 |
| | $ 152 | $ 1,195 | $ 1,032 | $ 3,588 | $ 10,084 | $ 28,193 | $ 2,982 | $ 5,049 | $ 0 | $ 44,245 |
| SOI | 98 | 38 | 49 | 38 | 46 | 14 | 0 | 0 | 0 | 283 |
| | $ 428 | $ 588 | $ 1,696 | $ 2,812 | $ 10,712 | $ 16,054 | $ 0 | $ 0 | $ 0 | $ 32,280 |
| TCP | 4 | 6 | 2 | 3 | 9 | 1 | 0 | 0 | 1 | 26 |
| | $ 15 | $ 95 | $ 83 | $ 278 | $ 2,216 | $ 624 | $ 0 | $ 0 | $ 18,432 | $ 21,743 |
| GSC | 7 | 5 | 11 | 13 | 21 | 20 | 2 | 1 | 0 | 77 |
| | $ 35 | $ 102 | $ 427 | $ 752 | $ 4,839 | $ 23,808 | $ 5,618 | $ 6,972 | $ 0 | $ 42,553 |
| GSS | 176 | 263 | 149 | 193 | 310 | 103 | 12 | 6 | 1 | 1,253 |
| | $ 835 | $ 4,432 | $ 6,697 | $ 13,322 | $ 37,842 | $ 109,580 | $ 40,775 | $ 30,605 | $ 24,054 | $ 306,392 |
| FAB | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 |

Table B-13 (Cont'd)

ARMY SUMMARY

TRANSACTION COST ANALYSIS BY SUPPLY SOURCE

TRANSACTION COST INTERVALS

| ACT SRC | $ 0.01-10.00 # RECORDS $ VALUE | $ 10.01-25.00 # RECORDS $ VALUE | $ 25.01-50.00 # RECORDS $ VALUE | $ 50.01-100.00 # RECORDS $ VALUE | $ 100.01-500.00 # RECORDS $ VALUE | $ 500.01-2500.00 # RECORDS $ VALUE | $ 2500.01-5000.00 # RECORDS $ VALUE | $ 5000.01-10000.00 # RECORDS $ VALUE | OVER $ 10000.00 # RECORDS $ VALUE | TOTAL # RECORDS $ VALUE |
|---|---|---|---|---|---|---|---|---|---|---|
| DPD | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 |
| DAK | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 |
| LPD FEX | 1 | 0 | 1 | 1 | 3 | 1 | 0 | 0 | 0 | 7 |
| | $ 3 | $ 0 | $ 45 | $ 54 | $ 486 | $ 622 | $ 0 | $ 0 | $ 0 | $ 1,210 |
| ICP FEX | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 |
| DTH FEX | 6 | 4 | 5 | 6 | 22 | 6 | 0 | 0 | 0 | 49 |
| | $ 27 | $ 65 | $ 188 | $ 488 | $ 5,910 | $ 7,104 | $ 0 | $ 0 | $ 0 | $ 13,782 |
| WWW | 7 | 3 | 5 | 2 | 7 | 1 | 1 | 1 | 1 | 28 |
| | $ 45 | $ 46 | $ 198 | $ 157 | $ 1,398 | $ 2,023 | $ 4,590 | $ 8,125 | $ 10,212 | $ 26,787 |
| TOTAL: | | | | | | | | | | |
| | 9,842 | | 2,882 | | 2,729 | | 80 | | 16 | |
| | $ 40,565 | $ | 99,688 | $ | 579,393 | $ | 269,330 | $ | 376,070 | |
| | | 4,889 | | 2,184 | | 682 | | 24 | | 23,248 |
| | $ | 79,815 | $ | 155,788 | $ | 689,649 | $ | 173,059 | $ | 2,462,552 |

Table B-14

NAVY SUMMARY

TRANSACTION COST ANALYSIS BY SUPPLY SOURCE

TRANSACTION COST INTERVALS

| ACT SRC | $ 3.01-10.00 # RECORDS $ VALUE | $ 10.01-25.00 # RECORDS $ VALUE | $ 25.01-50.00 # RECORDS $ VALUE | $ 50.01-100.00 # RECORDS $ VALUE | $ 100.01-500.00 # RECORDS $ VALUE | $ 500.01-2500.00 # RECORDS $ VALUE | $ 2500.01-5000.00 # RECORDS $ VALUE | $ 5000.01-10000.00 # RECORDS $ VALUE | OVER $ 10000.00 # RECORDS $ VALUE | TOTAL # RECORDS $ VALUE |
|---|---|---|---|---|---|---|---|---|---|---|
| COC | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>0 |
| GOC | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>0 |
| LPO STK | 49<br>$ 222 | 27<br>$ 431 | 11<br>$ 357 | 9<br>$ 651 | 19<br>$ 5,333 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 115<br>6,994 |
| ICP STK | 467<br>$ 1,684 | 167<br>$ 2,744 | 111<br>$ 4,076 | 76<br>$ 5,427 | 132<br>$ 21,536 | 16<br>$ 17,096 | 1<br>$ 2,971 | 0<br>$ 0 | 0<br>$ 0 | 940<br>55,527 |
| OTH STK | 66<br>$ 279 | 32<br>$ 558 | 31<br>$ 1,054 | 8<br>$ 575 | 13<br>$ 3,117 | 1<br>$ 1,004 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 151<br>6,587 |
| LPO | 764<br>$ 3,932 | 715<br>$ 12,261 | 478<br>$ 17,617 | 413<br>$ 30,197 | 538<br>$ 113,454 | 109<br>$ 116,121 | 28<br>$ 96,203 | 2<br>$ 12,655 | 6<br>$ 126,796 | 3,053<br>529,036 |
| LPD | 6<br>$ 33 | 3<br>$ 49 | 4<br>$ 151 | 15<br>$ 1,297 | 19<br>$ 4,590 | 11<br>$ 10,248 | 1<br>$ 4,666 | 0<br>$ 0 | 0<br>$ 0 | 59<br>21,134 |
| SOC | 45<br>$ 240 | 19<br>$ 315 | 11<br>$ 348 | 6<br>$ 390 | 6<br>$ 1,288 | 1<br>$ 1,069 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 87<br>3,650 |
| SOF | 4<br>$ 6 | 3<br>$ 46 | 0<br>$ 0 | 0<br>$ 0 | 3<br>$ 689 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 10<br>741 |
| SOG | 10<br>$ 59 | 3<br>$ 66 | 5<br>$ 152 | 3<br>$ 206 | 6<br>$ 875 | 2<br>$ 3,697 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 29<br>5,085 |
| SOI | 48<br>$ 273 | 17<br>$ 326 | 9<br>$ 325 | 13<br>$ 992 | 14<br>$ 3,376 | 1<br>$ 729 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 102<br>5,951 |
| ICP | 52<br>$ 177 | 25<br>$ 394 | 21<br>$ 737 | 28<br>$ 1,317 | 24<br>$ 5,292 | 1<br>$ 2,346 | 2<br>$ 8,306 | 0<br>$ 0 | 0<br>$ 0 | 145<br>18,569 |
| GSF | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>0 |
| GSS | 18<br>$ 84 | 7<br>$ 97 | 15<br>$ 518 | 6<br>$ 457 | 9<br>$ 1,747 | 3<br>$ 3,966 | 0<br>$ 0 | 1<br>$ 6,100 | 0<br>$ 0 | 59<br>12,969 |
| FAB | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 1<br>$ 1,401 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 1<br>1,401 |

Table B-14 (Cont'd)

NAVY SUMMARY

TRANSACTION COST ANALYSIS BY SUPPLY SOURCE

TRANSACTION COST INTERVALS

| ACT SRC | $ 0.01-10.00 # RECORDS $ VALUE | $ 10.01-25.00 # RECORDS $ VALUE | $ 25.01-50.00 # RECORDS $ VALUE | $ 50.01-100.00 # RECORDS $ VALUE | $ 100.01-500.00 # RECORDS $ VALUE | $ 500.01-2500.00 # RECORDS $ VALUE | $ 2500.01-5000.00 # RECORDS $ VALUE | $ 5000.01-10000.00 # RECORDS $ VALUE | OVER $ 10000.00 # RECORDS $ VALUE | # TOTAL RECORDS $ VALUE |
|---|---|---|---|---|---|---|---|---|---|---|
| DPD | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 |
| DAK | 67 | 26 | 24 | 19 | 14 | 6 | 1 | 2 | 0 | 159 |
| | $ 315 | $ 438 | $ 830 | $ 1,295 | $ 3,794 | $ 6,933 | $ 2,550 | $ 13,141 | $ 0 | $ 29,296 |
| LPD FFX | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 |
| TCP FFX | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 |
| OTH FFX | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 |
| WWW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 |
| TOTAL: | | | | | | | | | | |
| | 1,596 | 720 | | 767 | | 33 | | 6 | | |
| | $ 7,234 | $ 26,195 | | $ 165,391 | | $ 114,696 | | $ 126,796 | | |
| | | 1,043 | 588 | | 152 | | 5 | | | 4,910 |
| | | $ 17,525 | $ 42,597 | | $ 164,610 | | $ 31,696 | | $ | 696,940 |

Table B-15

AIR FORCE SUMMARY

TRANSACTION COST ANALYSIS BY SUPPLY SOURCE

TRANSACTION COST INTERVALS

| ACT SRC | $ 0.01-10.00 # RECORDS $ VALUE | $ 10.01-25.00 # RECORDS $ VALUE | $ 25.01-50.00 # RECORDS $ VALUE | $ 50.01-100.00 # RECORDS $ VALUE | $ 100.01-500.00 # RECORDS $ VALUE | $ 500.01-2500.00 # RECORDS $ VALUE | $ 2500.01-5000.00 # RECORDS $ VALUE | $ 5000.01-10000.00 # RECORDS $ VALUE | OVER $ 10000.00 # RECORDS $ VALUE | TOTAL # RECORDS $ VALUE |
|---|---|---|---|---|---|---|---|---|---|---|
| COC | 6,511 | 2,653 | 1,889 | 1,390 | 1,624 | 358 | 37 | 23 | 8 | 14,493 |
| | $ 24,345 | $ 43,708 | $ 68,473 | $ 98,035 | $ 352,475 | $ 364,873 | $ 139,020 | $ 150,447 | $ 131,193 | $ 1,373,569 |
| GOC | 3,099 | 523 | 311 | 174 | 86 | 6 | 0 | 0 | 0 | 4,196 |
| | $ 8,630 | $ 8,401 | $ 10,757 | $ 11,318 | $ 16,464 | $ 5,198 | $ 0 | $ 0 | $ 0 | $ 60,768 |
| LPO STK | 5,703 | 1,904 | 1,219 | 941 | 986 | 432 | 14 | 10 | 2 | 11,215 |
| | $ 20,740 | $ 30,553 | $ 44,685 | $ 65,698 | $ 216,156 | $ 500,159 | $ 48,227 | $ 60,476 | $ 69,421 | $ 1,057,115 |
| ICP STK | 14,673 | 3,171 | 1,690 | 1,241 | 1,023 | 187 | 28 | 7 | 8 | 22,028 |
| | $ 41,863 | $ 51,734 | $ 60,048 | $ 86,266 | $ 199,282 | $ 172,568 | $ 104,560 | $ 39,178 | $ 115,124 | $ 870,623 |
| OTH STK | 5,590 | 1,707 | 992 | 570 | 487 | 73 | 7 | 2 | 2 | 9,260 |
| | $ 21,333 | $ 27,833 | $ 31,924 | $ 35,878 | $ 76,506 | $ 64,640 | $ 19,167 | $ 17,424 | $ 41,726 | $ 339,431 |
| LPO | 1,435 | 833 | 651 | 633 | 812 | 248 | 44 | 18 | 6 | 4,625 |
| | $ 5,729 | $ 13,824 | $ 23,337 | $ 42,779 | $ 180,537 | $ 262,334 | $ 150,344 | $ 121,991 | $ 129,501 | $ 930,376 |
| LPD | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 |
| SOC | 691 | 199 | 182 | 95 | 158 | 48 | 4 | 2 | 0 | 1,379 |
| | $ 2,712 | $ 3,237 | $ 6,682 | $ 6,629 | $ 33,636 | $ 43,224 | $ 14,997 | $ 11,919 | $ 0 | $ 122,336 |
| SOE | 110 | 72 | 50 | 24 | 25 | 6 | 0 | 0 | 0 | 287 |
| | $ 423 | $ 1,214 | $ 1,766 | $ 1,796 | $ 5,039 | $ 4,358 | $ 0 | $ 0 | $ 0 | $ 14,596 |
| SOG | 535 | 247 | 168 | 127 | 194 | 40 | 3 | 0 | 0 | 1,314 |
| | $ 2,256 | $ 4,090 | $ 6,083 | $ 9,493 | $ 43,728 | $ 34,404 | $ 9,771 | $ 0 | $ 0 | $ 109,825 |
| SOI | 527 | 176 | 132 | 112 | 92 | 12 | 0 | 0 | 0 | 1,051 |
| | $ 1,775 | $ 2,895 | $ 4,740 | $ 7,947 | $ 20,329 | $ 12,398 | $ 0 | $ 0 | $ 0 | $ 50,884 |
| ICP | 292 | 278 | 155 | 113 | 131 | 47 | 11 | 8 | 3 | 1,035 |
| | $ 1,861 | $ 5,235 | $ 5,709 | $ 7,669 | $ 25,174 | $ 55,911 | $ 47,533 | $ 60,645 | $ 43,300 | $ 253,037 |
| GSE | 20 | 41 | 11 | 14 | 25 | 10 | 0 | 0 | 0 | 121 |
| | $ 80 | $ 674 | $ 383 | $ 996 | $ 5,390 | $ 8,857 | $ 0 | $ 0 | $ 0 | $ 16,380 |
| GSS | 1,992 | 605 | 327 | 158 | 158 | 47 | 22 | 6 | 6 | 3,321 |
| | $ 6,547 | $ 10,099 | $ 11,555 | $ 11,279 | $ 34,513 | $ 50,297 | $ 77,924 | $ 43,948 | $ 74,580 | $ 320,742 |
| FAB | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 |

Table B-15 (Cont'd)
AIR FORCE SUMMARY

TRANSACTION COST ANALYSIS BY SUPPLY SOURCE

TRANSACTION COST INTERVALS

| ACT SPC | $ 0.01-10.00 # RECORDS $ VALUE | $ 10.01-25.00 # RECORDS $ VALUE | $ 25.01-50.00 # RECORDS $ VALUE | $ 50.01-100.00 # RECORDS $ VALUE | $ 100.01-500.00 # RECORDS $ VALUE | $ 500.01-2500.00 # RECORDS $ VALUE | $ 2500.01-5000.00 # RECORDS $ VALUE | $ 5000.01-10000.00 # RECORDS $ VALUE | OVER $ 10000.00 # RECORDS $ VALUE | TOTAL # RECORDS $ VALUE |
|---|---|---|---|---|---|---|---|---|---|---|
| DPD | 0 | 0 | 0 | 2 | 5 | 5 | 0 | 0 | 0 | 12 |
| | $ 0 | $ 0 | $ 0 | $ 133 | $ 1,027 | $ 7,381 | $ 0 | $ 0 | $ 0 | $ 8,538 |
| DAK | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 |
| LPJ FEX | 86 | 31 | 23 | 15 | 29 | 25 | 3 | 0 | 0 | 212 |
| | $ 307 | $ 434 | $ 795 | $ 1,063 | $ 7,703 | $ 28,719 | $ 11,881 | $ 0 | $ 0 | $ 50,902 |
| ICP FEX | 320 | 79 | 44 | 19 | 17 | 7 | 1 | 0 | 0 | 487 |
| | $ 798 | $ 1,293 | $ 1,655 | $ 1,325 | $ 3,238 | $ 7,242 | $ 3,470 | $ 0 | $ 0 | $ 19,021 |
| JTH FEX | 133 | 54 | 18 | 11 | 12 | 2 | 1 | 0 | 0 | 201 |
| | $ 398 | $ 921 | $ 605 | $ 741 | $ 2,756 | $ 2,295 | $ 2,923 | $ 0 | $ 0 | $ 10,631 |
| WWW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 |
| TOTAL: | 41,657 | 7,772 | | 5,784 | | 175 | | 35 | | |
| | $ 139,089 | $ 279,197 | | $ 1,223,953 | | $ 629,817 | | $ 604,845 | | |
| | | 12,579 | 5,606 | | 1,553 | | 76 | | | 75,237 |
| | | $ 226,145 | $ 394,242 | | $ 1,624,858 | | $ 506,028 | | $ | 5,607,974 |

Table B-16

MARINE CORPS SUMMARY

TRANSACTION COST ANALYSIS BY SUPPLY SOURCE

TRANSACTION COST INTERVALS

| ACT SRC | $ .71-10.70 # RECORDS $ VALUE | $ 10.71-25.00 # RECORDS $ VALUE | $ 25.01-50.00 # RECORDS $ VALUE | $ 50.01-100.00 # RECORDS $ VALUE | $ 100.01-500.00 # RECORDS $ VALUE | $ 500.01-2500.00 # RECORDS $ VALUE | $ 2500.01-5000.00 # RECORDS $ VALUE | $ 5000.01-10000.00 # RECORDS $ VALUE | OVER $ 10000.00 # RECORDS $ VALUE | TOTAL # RECORDS $ VALUE |
|---|---|---|---|---|---|---|---|---|---|---|
| CAC | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 |
| GAC | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 |
| LPA STK | 1,721 | 892 | 523 | 389 | 334 | 41 | 3 | 1 | 0 | 3,904 |
| | $ 6,743 | $ 14,363 | $ 18,782 | $ 28,276 | $ 66,589 | $ 38,129 | $ 9,832 | $ 5,790 | $ 0 | $ 188,504 |
| TCP STK | 5,953 | 1,301 | 607 | 314 | 203 | 27 | 0 | 1 | 0 | 8,406 |
| | $ 16,947 | $ 21,172 | $ 21,242 | $ 21,228 | $ 37,703 | $ 21,466 | $ 0 | $ 8,158 | $ 0 | $ 147,916 |
| OTH STK | 573 | 149 | 59 | 37 | 29 | 1 | 0 | 0 | 0 | 848 |
| | $ 1,987 | $ 2,367 | $ 2,146 | $ 2,663 | $ 5,005 | $ 546 | $ 0 | $ 0 | $ 0 | $ 14,711 |
| LPA | 349 | 276 | 289 | 238 | 311 | 88 | 13 | 6 | 2 | 1,612 |
| | $ 1,662 | $ 4,668 | $ 10,568 | $ 16,712 | $ 66,861 | $ 90,828 | $ 42,066 | $ 41,118 | $ 106,950 | $ 381,431 |
| LPO | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 |
| SAC | 38 | 7 | 9 | 5 | 6 | 1 | 0 | 0 | 0 | 66 |
| | $ 146 | $ 116 | $ 321 | $ 301 | $ 1,237 | $ 508 | $ 0 | $ 0 | $ 0 | $ 2,629 |
| SAF | 5 | 9 | 4 | 5 | 7 | 1 | 0 | 0 | 0 | 31 |
| | $ 28 | $ 142 | $ 155 | $ 380 | $ 1,325 | $ 764 | $ 0 | $ 0 | $ 0 | $ 2,794 |
| SAG | 39 | 9 | 7 | 9 | 3 | 0 | 0 | 0 | 0 | 67 |
| | $ 139 | $ 142 | $ 228 | $ 740 | $ 649 | $ 0 | $ 0 | $ 0 | $ 0 | $ 1,898 |
| SAI | 33 | 25 | 7 | 14 | 7 | 1 | 0 | 0 | 0 | 87 |
| | $ 110 | $ 423 | $ 237 | $ 1,134 | $ 1,770 | $ 502 | $ 0 | $ 0 | $ 0 | $ 4,176 |
| TCP | 7 | 4 | 15 | 3 | 2 | 0 | 0 | 0 | 0 | 31 |
| | $ 29 | $ 70 | $ 502 | $ 107 | $ 210 | $ 0 | $ 0 | $ 0 | $ 0 | $ 998 |
| GSF | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 |
| GSS | 12 | 2 | 4 | 3 | 5 | 2 | 1 | 1 | 0 | 30 |
| | $ 49 | $ 35 | $ 161 | $ 229 | $ 809 | $ 1,633 | $ 2,925 | $ 7,563 | $ 0 | $ 13,400 |
| FAB | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 |

Table B-16 (Cont'd)

MARINE CORPS SUMMARY

TRANSACTION COST ANALYSIS BY SUPPLY SOURCE

TRANSACTION COST INTERVALS

| ACT SRC | $ 0.01-10.00 # RECORDS $ VALUE | $ 10.01-25.00 # RECORDS $ VALUE | $ 25.01-50.00 # RECORDS $ VALUE | $ 50.01-100.00 # RECORDS $ VALUE | $ 100.01-500.00 # RECORDS $ VALUE | $ 500.01-2500.00 # RECORDS $ VALUE | $ 2500.01-5000.00 # RECORDS $ VALUE | $ 5000.01-10000.00 # RECORDS $ VALUE | OVER $ 10000.00 # RECORDS $ VALUE | TOTAL # RECORDS $ VALUE |
|---|---|---|---|---|---|---|---|---|---|---|
| DPD | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 |
| DAK | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 |
| LPD FFX | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 |
| ICP FFX | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 |
| OTH FFX | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 |
| WWW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 |
| TOTAL: | 8,778 | 2,674 | 1,524 | 1,017 | 907 | 162 | 17 | 9 | 2 | 15,082 |
| | $ 27,840 | $ 43,498 | $ 54,342 | $ 71,844 | $ 182,158 | $ 154,373 | $ 54,823 | $ 62,629 | $ 106,950 | $ 758,457 |

Table B-17

DoD SUMMARY

TRANSACTION COST ANALYSIS BY SUPPLY SOURCE

TRANSACTION COST INTERVALS

| ACT SRC | $ 0.01-10.00 # RECORDS $ VALUE | $ 10.01-25.00 # RECORDS $ VALUE | $ 25.01-50.00 # RECORDS $ VALUE | $ 50.01-100.00 # RECORDS $ VALUE | $ 100.01-500.00 # RECORDS $ VALUE | $ 500.01-2500.00 # RECORDS $ VALUE | $ 2500.01-5000.00 # RECORDS $ VALUE | $ 5000.01-10000.00 # RECORDS $ VALUE | OVER $ 10000.00 # RECORDS $ VALUE | TOTAL # RECORDS $ VALUE |
|---|---|---|---|---|---|---|---|---|---|---|
| CDC | 6,511 | 2,653 | 1,889 | 1,398 | 1,624 | 358 | 37 | 23 | 8 | 14,493 |
| | $ 24,345 | $ 43,778 | $ 68,473 | $ 99,235 | $ 352,475 | $ 364,873 | $ 139,020 | $ 150,447 | $ 131,193 | $ 1,373,569 |
| GDC | 3,899 | 520 | 311 | 174 | 86 | 6 | 0 | 0 | 0 | 4,196 |
| | $ 8,630 | $ 8,401 | $ 10,757 | $ 11,318 | $ 16,464 | $ 5,198 | $ 0 | $ 0 | $ 0 | $ 60,768 |
| LDD STK | 12,634 | 4,716 | 2,491 | 1,693 | 1,683 | 544 | 24 | 13 | 3 | 23,801 |
| | $ 47,397 | $ 75,186 | $ 88,957 | $ 123,244 | $ 362,138 | $ 609,204 | $ 82,686 | $ 82,285 | $ 94,516 | $ 1,562,583 |
| TCD STK | 21,625 | 4,844 | 2,498 | 1,690 | 1,377 | 232 | 30 | 8 | 8 | 32,312 |
| | $ 62,141 | $ 78,762 | $ 88,531 | $ 117,838 | $ 266,342 | $ 213,491 | $ 111,266 | $ 47,336 | $ 115,124 | $ 1,100,031 |
| DTH STK | 7,577 | 2,434 | 1,234 | 784 | 577 | 97 | 14 | 2 | 3 | 12,722 |
| | $ 29,272 | $ 39,456 | $ 43,927 | $ 53,859 | $ 108,529 | $ 88,119 | $ 42,856 | $ 17,424 | $ 58,276 | $ 481,718 |
| LDD | 4,755 | 3,509 | 2,721 | 2,473 | 3,315 | 833 | 125 | 38 | 23 | 17,792 |
| | $ 21,976 | $ 56,503 | $ 98,761 | $ 177,764 | $ 714,403 | $ 844,467 | $ 424,187 | $ 267,947 | $ 590,682 | $ 3,196,690 |
| LDD | 6 | 3 | 4 | 15 | 19 | 11 | 1 | 0 | 0 | 59 |
| | $ 33 | $ 49 | $ 151 | $ 1,397 | $ 4,893 | $ 10,248 | $ 4,666 | $ 0 | $ 0 | $ 21,134 |
| SDC | 1,822 | 342 | 324 | 152 | 249 | 86 | 13 | 3 | 2 | 2,263 |
| | $ 3,615 | $ 6,158 | $ 11,752 | $ 12,632 | $ 51,943 | $ 83,028 | $ 42,737 | $ 17,025 | $ 54,292 | $ 283,182 |
| SDE | 139 | 137 | 71 | 35 | 42 | 8 | 0 | 0 | 0 | 402 |
| | $ 538 | $ 1,808 | $ 2,532 | $ 2,653 | $ 8,676 | $ 6,146 | $ 0 | $ 0 | $ 0 | $ 22,353 |
| SDG | 621 | 328 | 208 | 147 | 253 | 58 | 4 | 1 | 0 | 1,660 |
| | $ 2,696 | $ 5,493 | $ 7,495 | $ 14,227 | $ 55,336 | $ 58,294 | $ 12,753 | $ 5,849 | $ 0 | $ 161,053 |
| SDI | 706 | 256 | 197 | 177 | 159 | 28 | 0 | 0 | 0 | 1,523 |
| | $ 2,598 | $ 4,232 | $ 6,998 | $ 12,885 | $ 36,185 | $ 29,683 | $ 0 | $ 0 | $ 0 | $ 92,491 |
| TCD | 355 | 313 | 193 | 136 | 166 | 49 | 13 | 8 | 4 | 1,237 |
| | $ 2,382 | $ 5,794 | $ 7,031 | $ 9,451 | $ 32,892 | $ 58,881 | $ 55,839 | $ 60,645 | $ 61,732 | $ 294,347 |
| DSF | 27 | 46 | 22 | 24 | 46 | 33 | 2 | 1 | 0 | 198 |
| | $ 115 | $ 776 | $ 813 | $ 1,748 | $ 10,229 | $ 32,665 | $ 5,618 | $ 6,972 | $ 0 | $ 58,933 |
| DSS | 2,198 | 877 | 535 | 360 | 482 | 155 | 35 | 14 | 7 | 4,663 |
| | $ 7,595 | $ 14,663 | $ 18,931 | $ 25,266 | $ 174,111 | $ 165,473 | $ 121,624 | $ 97,216 | $ 98,634 | $ 653,503 |
| FAB | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 1,401 | $ 0 | $ 0 | $ 0 | $ 1,401 |

Table B-17 (Cont'd)

DoD SUMMARY

TRANSACTION COST ANALYSIS BY SUPPLY SOURCE

TRANSACTION COST INTERVALS

| ACT SRC | $ 2.01-10.00 # RECORDS $ VALUE | $ 10.01-25.00 # RECORDS $ VALUE | $ 25.01-50.00 # RECORDS $ VALUE | $ 50.01-100.00 # RECORDS $ VALUE | $ 100.01-500.00 # RECORDS $ VALUE | $ 500.01-2500.00 # RECORDS $ VALUE | $ 2500.01-5000.00 # RECORDS $ VALUE | $ 5000.01-10000.00 # RECORDS $ VALUE | OVER $ 10000.00 # RECORDS $ VALUE | TOTAL # RECORDS $ VALUE |
|---|---|---|---|---|---|---|---|---|---|---|
| DPD | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 2<br>$ 130 | 5<br>$ 1,027 | 5<br>$ 7,381 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 12<br>$ 8,538 |
| DAK | 67<br>$ 315 | 26<br>$ 438 | 24<br>$ 830 | 19<br>$ 1,295 | 14<br>$ 3,794 | 6<br>$ 6,933 | 1<br>$ 2,550 | 2<br>$ 13,141 | 0<br>$ 0 | 159<br>$ 29,296 |
| LPO FEX | 97<br>$ 310 | 31<br>$ 434 | 24<br>$ 840 | 16<br>$ 1,117 | 32<br>$ 8,189 | 26<br>$ 29,341 | 3<br>$ 11,881 | 0<br>$ 0 | 0<br>$ 0 | 219<br>$ 52,112 |
| ICP FEX | 320<br>$ 798 | 79<br>$ 1,293 | 44<br>$ 1,655 | 13<br>$ 1,325 | 17<br>$ 3,238 | 7<br>$ 7,242 | 1<br>$ 3,470 | 0<br>$ 0 | 0<br>$ 0 | 487<br>$ 19,021 |
| ATH FEX | 189<br>$ 417 | 58<br>$ 996 | 23<br>$ 793 | 17<br>$ 1,229 | 34<br>$ 8,666 | 8<br>$ 9,390 | 1<br>$ 2,923 | 0<br>$ 0 | 0<br>$ 0 | 250<br>$ 24,413 |
| WWW | 7<br>$ 45 | 3<br>$ 46 | 5<br>$ 198 | 2<br>$ 153 | 7<br>$ 1,398 | 1<br>$ 2,023 | 1<br>$ 4,598 | 1<br>$ 8,125 | 1<br>$ 10,212 | 28<br>$ 26,787 |
| TOTAL: | 61,865<br>$ 214,728 | 12,818<br>$ 459,422 | 13,187<br>$ 2,154,895 | 305<br>$ 1,068,666 | 59<br>$ 1,214,661 | | | | | |
| | 21,185<br>$ 346,186 | 9,395<br>$ 664,263 | 2,549<br>$ 2,633,491 | 114<br>$ 773,612 | $ | 118,477<br>$ 9,525,923 | | | | |

Tables B-18 through B-25 are a series of matrices showing, for selected installations, Service Summaries and a DoD Summary, both number and dollar value of receipts for each possible combination of authorized and actual sources. Table B-18 is a matrix containing Carswell Air Force Base data. Table B-19 is a matrix containing Offutt Air Force Base data. Table B-20 is a matrix containing Hill Air Force Base data. Table B-21 contains Army data only. Table B-22 contains Navy data only. Table B-23 contains Air Force data only. Table B-24 contains Marine Corps data only. Table B-25 is a DoD Summary.

Table B-18

AUTHORIZED VS. ACTUAL SOURCE - CARSWELL AIR FORCE BASE

| ACTUAL SOURCE | AUTHORIZED SOURCE | | | | | | | | | | | | | | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | COC | | GOC | | LPO | | S9C | S9E | S9G | S9I | ICP | GSF | GSS | FAB | WWW | |
| COC | 1,119<br>$256,127 | | | | 0<br>$0 | | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 1,119<br>$256,127 |
| | | | 0<br>$0 | | | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | |
| GOC | 0<br>$0 | | | | 0<br>$0 | | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 |
| | | | 0<br>$0 | | | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | |
| STK | 0<br>$0 | | | | 42<br>$10,049 | | | 0<br>$0 | | 19<br>$153 | | 15<br>$492 | | 0<br>$0 | | 312<br>$32,626 |
| | | | 0<br>$0 | | | | 21<br>$15,447 | | 29<br>$3,153 | | 56<br>$2,254 | | 130<br>$1,078 | | 0<br>$0 | |
| LPO | 0<br>$0 | | | | 136<br>$52,354 | | | 0<br>$0 | | 0<br>$0 | | 22<br>$1,496 | | 0<br>$0 | | 161<br>$54,038 |
| | | | 0<br>$0 | | | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 3<br>$188 | | 0<br>$0 | |
| S9C | 0<br>$0 | | | | 0<br>$0 | | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 26<br>$8,031 |
| | | | 0<br>$0 | | | | 26<br>$8,031 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | |
| S9E | 0<br>$0 | | | | 0<br>$0 | | | 1<br>$474 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 1<br>$474 |
| | | | 0<br>$0 | | | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | |
| S9G | 0<br>$0 | | | | 0<br>$0 | | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 25<br>$3,490 |
| | | | 0<br>$0 | | | | 0<br>$0 | | 25<br>$3,490 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | |

Table B-18 (Cont'd)

AUTHORIZED VS. ACTUAL SOURCE - CARSWELL AIR FORCE BASE

| ACTUAL SOURCE | AUTHORIZED SOURCE | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | COC | GOC | LPO | S9C | S9E | S9G | S9I | ICP | GSF | GSS | FAB | WWW | TOTAL |
| S9I | 0<br>$0 | 0<br>$0 | 0<br>$0 | 0<br>$0 | 0<br>$0 | 0<br>$0 | 17<br>$238 | 0<br>$0 | 0<br>$0 | 0<br>$0 | 0<br>$0 | 0<br>$0 | 17<br>$238 |
| TCP | 0<br>$0 | 0<br>$0 | 0<br>$0 | 0<br>$0 | 0<br>$0 | 0<br>$0 | 0<br>$0 | 47<br>$32,902 | 1<br>$175 | 4<br>$413 | 0<br>$0 | 0<br>$0 | 52<br>$33,490 |
| GSF | 0<br>$0 | 2<br>$0 | 0<br>$0 | 0<br>$0 | 0<br>$0 | 0<br>$0 | 0<br>$0 | 0<br>$0 | 28<br>$1,160 | 0<br>$0 | 0<br>$0 | 0<br>$0 | 28<br>$1,160 |
| GSS | 0<br>$0 | 0<br>$0 | 0<br>$0 | 0<br>$0 | 0<br>$0 | 0<br>$0 | 0<br>$0 | 0<br>$0 | 0<br>$0 | 116<br>$3,027 | 0<br>$0 | 0<br>$0 | 116<br>$3,027 |
| FAB | 0<br>$0 | 0<br>$0 | 0<br>$0 | 0<br>$0 | 0<br>$0 | 0<br>$0 | 0<br>$0 | 0<br>$0 | 0<br>$0 | 0<br>$0 | 0<br>$0 | 0<br>$0 | 0<br>$0 |
| DPD | 0<br>$0 | 0<br>$0 | 0<br>$0 | 0<br>$0 | 0<br>$0 | 0<br>$0 | 0<br>$0 | 0<br>$0 | 0<br>$0 | 0<br>$0 | 0<br>$0 | 0<br>$0 | 0<br>$0 |
| FEX | 0<br>$0 | 0<br>$0 | 5<br>$2,300 | 0<br>$0 | 0<br>$0 | 0<br>$0 | 0<br>$0 | 0<br>$0 | 0<br>$0 | 0<br>$0 | 0<br>$0 | 0<br>$0 | 11<br>$2,734 |
| | 0<br>$0 | 0<br>$0 | 2<br>$4 | 1<br>$210 | 0<br>$0 | 0<br>$0 | 2<br>$218 | 0<br>$0 | 0<br>$0 | 1<br>$2 | 0<br>$0 | 0<br>$0 | |

Table B-18 (Cont'd)

AUTHORIZED VS. ACTUAL SOURCE - CARSWELL AIR FORCE BASE

| ACTUAL SOURCE | AUTHORIZED SOURCE COC | GOC | LPO | S9C | S9E | S9G | S9I | ICP | GSF | GSS | FAB | WWW | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WWW | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | |
| LPD | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | |
| OAK | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | |
| TOT | 1,119<br>$256,127 | | 183<br>$64,703 | | 1<br>$474 | | 36<br>$391 | | 66<br>$3,323 | | 0<br>$0 | | 1,868<br>$396,235 |
| | | 0<br>$0 | | 49<br>$23,482 | | 55<br>$6,853 | | 105<br>$35,374 | | 254<br>$5,508 | | 0<br>$0 | |

Table B-19

AUTHORIZED VS. ACTUAL SOURCE - OFFUTT AIR FORCE BASE

| ACTUAL SOURCE | AUTHORIZED SOURCE | | | | | | | | | | | | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | COC | | LPO | | SAE | | SAI | | GSF | | FAB | | |
| | | SOC | | SAC | | SAG | | ICP | | GSS | | WWW | |
| COC | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | |
| GOC | 0<br>$0 | | 1<br>$4 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 4,196<br>$60,768 |
| | 4,195<br>$60,764 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | |
| STK | 0<br>$0 | | 66<br>$18,470 | | 22<br>$250 | | 37<br>$227 | | 2<br>$28 | | 3<br>$288 | | 537<br>$32,396 |
| | | 0<br>$0 | | 10<br>$4,919 | | 75<br>$1,204 | | 100<br>$1,748 | | 222<br>$5,262 | | 0<br>$0 | |
| LPO | 0<br>$0 | | 57<br>$3,779 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 61<br>$4,553 |
| | | 0<br>$0 | | 0<br>$0 | | 3<br>$699 | | 0<br>$0 | | 1<br>$75 | | 0<br>$0 | |
| SAC | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 22<br>$3,576 |
| | | 0<br>$0 | | 22<br>$3,576 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | |
| SAE | 0<br>$0 | | 0<br>$0 | | 21<br>$1,264 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 21<br>$1,264 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | |
| SAG | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 59<br>$1,940 |
| | | 0<br>$0 | | 0<br>$0 | | 59<br>$1,940 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | |

Table B-19 (Cont'd)

AUTHORIZED VS. ACTUAL SOURCE - OFFUTT AIR FORCE BASE

| ACTUAL SOURCE | AUTHORIZED SOURCE: COC | | LPO | | SPE | | SPI | | GSF | | FAB | | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | GOC | | SPC | | SPG | | ICP | | GSS | | WWW | |
| SPI | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 23<br>$2,053 | | 0<br>$0 | | 0<br>$0 | | 23<br>$2,053 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | |
| ICP | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 113<br>$21,257 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 113<br>$21,257 | | 0<br>$0 | | 0<br>$0 | |
| GSF | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 1<br>$68 | | 0<br>$0 | | 1<br>$68 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | |
| GSS | 0<br>$0 | | 2<br>$9,862 | | 0<br>$0 | | 1<br>$3 | | 0<br>$0 | | 0<br>$0 | | 155<br>$28,257 |
| | | 0<br>$0 | | 1<br>$47 | | 0<br>$0 | | 0<br>$0 | | 151<br>$10,345 | | 0<br>$0 | |
| FAB | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | |
| DPD | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | |
| FEX | 0<br>$0 | | 0<br>$0 | | 2<br>$6 | | 2<br>$2 | | 0<br>$0 | | 0<br>$0 | | 17<br>$197 |
| | | 0<br>$0 | | 0<br>$0 | | 2<br>$10 | | 4<br>$54 | | 7<br>$125 | | 0<br>$0 | |

Table B-19 (Cont'd)

AUTHORIZED VS. ACTUAL SOURCE - OFFUTT AIR FORCE BASE

| ACTUAL SOURCE | AUTHORIZED SOURCE | | | | | | | | | | | | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | COC | | LPO | | S9E | | S9I | | GSF | | FAB | | |
| | GOC | | S9C | | S9G | | ICP | | GSS | | WWW | | |
| WWW | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | |
| LPD | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | |
| OAK | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | |
| TOT | 0<br>$0 | | 126<br>$32,115 | | 45<br>$1,520 | | 63<br>$2,285 | | 3<br>$96 | | 3<br>$288 | | 5,205<br>$148,329 |
| | | 4,195<br>$60,764 | | 33<br>$8,542 | | 139<br>$3,853 | | 217<br>$23,059 | | 381<br>$15,807 | | 0<br>$0 | |

Table B-20

AUTHORIZED VS. ACTUAL SOURCE - HILL AIR FORCE BASE

| ACTUAL SOURCE | AUTHORIZED SOURCE | | | | | | | | | | | | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | COC | GOC | LPO | S9C | S9E | S9G | S9I | ICP | GSF | GSS | FAB | WWW | |
| COC | 611<br>$118,702 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 611<br>$118,702 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | |
| GOC | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | |
| STK | 0<br>$0 | | 7<br>$172 | | 91<br>$2,234 | | 355<br>$4,271 | | 0<br>$0 | | 0<br>$0 | | 1,425<br>$39,398 |
| | | 0<br>$0 | | 479<br>$17,902 | | 249<br>$10,445 | | 21<br>$568 | | 223<br>$3,806 | | 0<br>$0 | |
| LPO | 0<br>$0 | | 4<br>$114 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 4<br>$114 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | |
| S9C | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 59<br>$2,630 |
| | | 0<br>$0 | | 59<br>$2,630 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | |
| S9E | 0<br>$0 | | 0<br>$0 | | 12<br>$213 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 12<br>$213 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | |
| S9G | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 66<br>$2,039 |
| | | 0<br>$0 | | 0<br>$0 | | 66<br>$2,039 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | |

Table B-20 (Cont'd)

AUTHORIZED VS. ACTUAL SOURCE - HILL AIR FORCE BASE

| ACTUAL SOURCE | AUTHORIZED SOURCE | | |

Table B-20 (Cont'd)

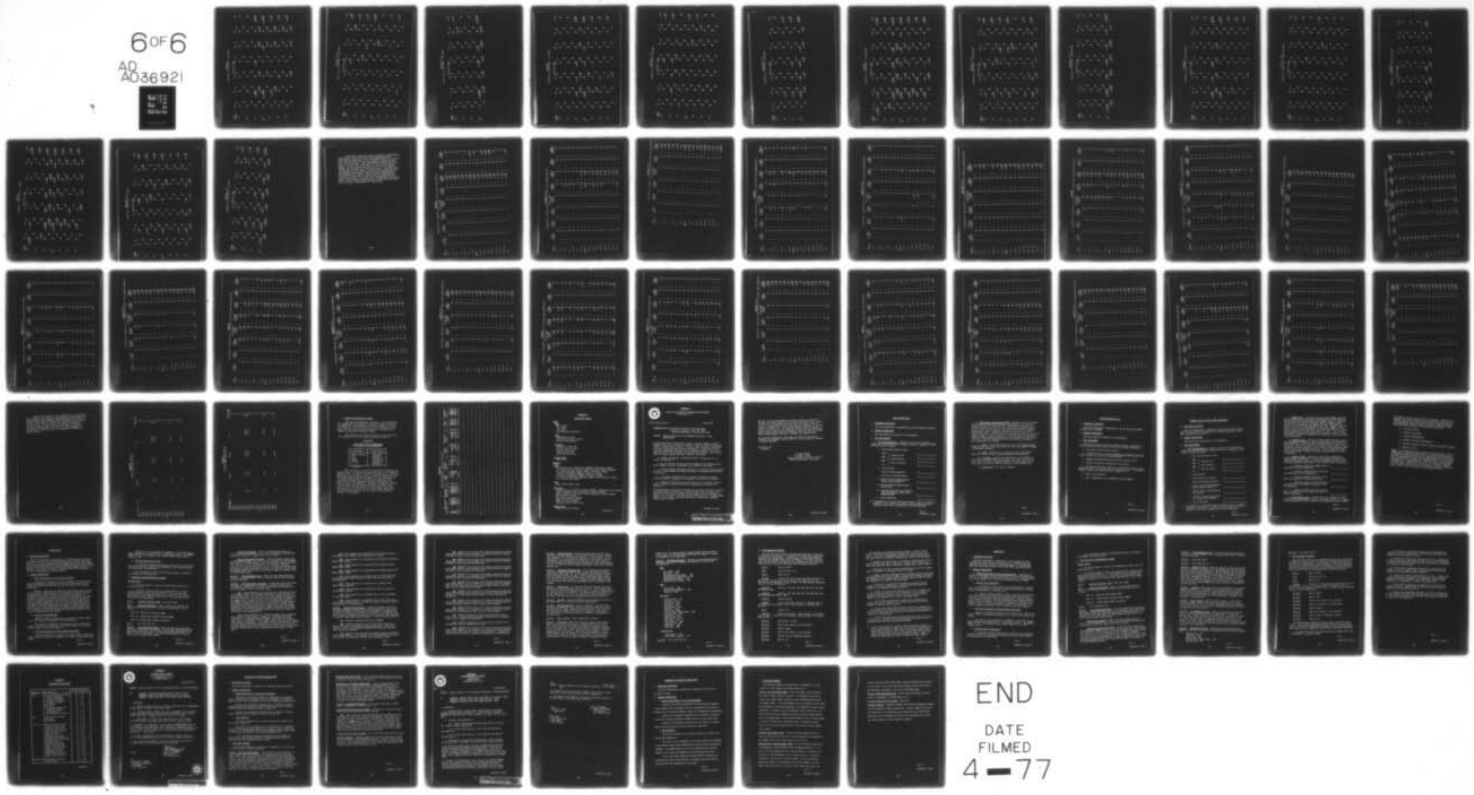
AUTHORIZED VS. ACTUAL SOURCE - HILL AIR FORCE BASE

| ACTUAL SOURCE | AUTHORIZED SOURCE COC | GOC | LPD | SQC | SQE | SQG | SQI | ICP | GSF | GSS | FAB | WWW | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WWW | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | |
| LPD | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | |
| OAK | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | |
| TOT | 611<br>$118,702 | | 11<br>$286 | | 103<br>$2,447 | | 437<br>$7,797 | | 4<br>$66 | | 0<br>$0 | | 2,446<br>$210,722 |
| | | 0<br>$0 | | 538<br>$20,532 | | 315<br>$12,484 | | 42<br>$11,033 | | 385<br>$37,375 | | 0<br>$0 | |

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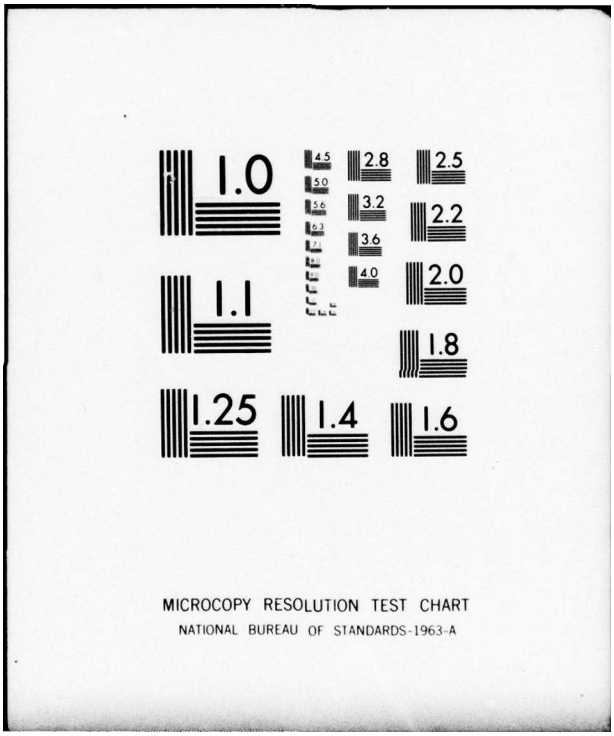

1.0
1.1
1.25
1.4
1.6
1.8
2.0
2.2
2.5
2.8
3.2
3.6
4.0
4.5
5.0
5.6
6.3
7.1
MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

Table B-21

AUTHORIZED VS. ACTUAL SOURCE - ARMY SUMMARY

| ACTUAL SOURCE | AUTHORIZED SOURCE: COC | GOC | LPO | S9C | S9E | S9G | S9I | ICP | GSF | GSS | FAB | WWW | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| COC | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | |
| GOC | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | |
| STK | 0<br>$0 | | 8,567<br>$389,970 | | 0<br>$0 | | 491<br>$5,696 | | 0<br>$0 | | 0<br>$0 | | 11,968<br>$456,924 |
| | | 0<br>$0 | | 255<br>$15,133 | | 192<br>$5,136 | | 0<br>$0 | | 1,045<br>$57,175 | | 618<br>$63,814 | |
| LPO | 0<br>$0 | | 8,366<br>$1,335,500 | | 0<br>$0 | | 0<br>$0 | | 56<br>$3,587 | | 0<br>$0 | | 8,502<br>$1,357,847 |
| | | 0<br>$0 | | 0<br>$0 | | 2<br>$5,368 | | 0<br>$0 | | 58<br>$12,158 | | 20<br>$1,242 | |
| S9C | 0<br>$0 | | 42<br>$34,991 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 731<br>$154,567 |
| | | 0<br>$0 | | 378<br>$97,683 | | 0<br>$0 | | 0<br>$0 | | 82<br>$12,593 | | 229<br>$9,300 | |
| S9E | 0<br>$0 | | 0<br>$0 | | 12<br>$743 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 74<br>$4,222 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 7<br>$519 | | 55<br>$2,960 | |
| S9G | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 250<br>$44,245 |
| | | 0<br>$0 | | 0<br>$0 | | 141<br>$20,703 | | 0<br>$0 | | 37<br>$19,494 | | 72<br>$4,048 | |

Table B-21 (Cont'd)

AUTHORIZED VS. ACTUAL SOURCE - ARMY SUMMARY

| ACTUAL SOURCE | AUTHORIZED SOURCE | | | | | | | | | | | | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | COC | GOC | LPO | S9C | S9E | S9G | S9I | ICP | GSF | GSS | FAB | WWW | |
| S9I | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 147<br>$22,184 | | 0<br>$0 | | 0<br>$0 | | 283<br>$32,200 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 1<br>$16 | | 135<br>$10,000 | |
| ICP | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 1<br>$109 | | 0<br>$0 | | 0<br>$0 | | 26<br>$21,743 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 24<br>$21,460 | | 1<br>$94 | | 0<br>$0 | |
| GSF | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 77<br>$42,553 | | 0<br>$0 | | 77<br>$42,553 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | |
| GSS | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 1,253<br>$306,392 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 1,239<br>$299,246 | | 14<br>$7,146 | |
| FAB | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | |
| OPD | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | |
| FEX | 0<br>$0 | | 7<br>$1,210 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 7<br>$1,210 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | |

Table B-21 (Cont'd)

AUTHORIZED VS. ACTUAL SOURCE - ARMY SUMMARY

| ACTUAL SOURCE | AUTHORIZED SOURCE | | | | | | | | | | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | CnC | GDC | LPD | S9C | S9E | S9G | S9I | ICP | GSF | GSS | FAB WWW | |
| WWW | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | 28<br>$26,787 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | 28<br>$26,787 | |
| LPD | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | 0<br>$0 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | 0<br>$0 | |
| OAK | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | 0<br>$0 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | 0<br>$0 | |
| TOT | 0<br>$0 | | 16,982<br>$1,681,671 | | 12<br>$743 | | 639<br>$28,069 | | 133<br>$46,140 | | 0<br>$0 | 23,199<br>$2,448,770 |
| | | 0<br>$0 | | 633<br>$112,816 | | 335<br>$31,199 | | 24<br>$21,463 | | 3,278<br>$401,295 | 1,171<br>$125,377 | |

Table B-22

AUTHORIZED VS. ACTUAL SOURCE - NAVY SUMMARY

| ACTUAL SOURCE | AUTHORIZED SOURCE | | | | | | | | | | | | | | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | COC | | LPO | | S9E | S9I | | GSF | | FAB | | | | | |
| | | GOC | | S9C | | S9G | ICP | | GSS | | WWW | | | | |
| COC | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | | | | 0<br>$0 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | | | |
| GOC | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | | | | 0<br>$0 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | | | |
| STK | 0<br>$0 | | 115<br>$6,994 | | 45<br>$1,017 | 355<br>$21,842 | | 0<br>$0 | | 0<br>$0 | | | | | 1,206<br>$69,100 |
| | | 0<br>$0 | | 293<br>$15,605 | | 182<br>$14,442 | 65<br>$2,621 | | 148<br>$6,029 | | 3<br>$558 | | | | |
| LPO | 0<br>$0 | | 2,922<br>$506,263 | | 2<br>$93 | 14<br>$2,393 | | 2<br>$1,658 | | 0<br>$0 | | | | | 3,053<br>$529,036 |
| | | 0<br>$0 | | 78<br>$12,385 | | 18<br>$3,807 | 8<br>$643 | | 9<br>$1,794 | | 0<br>$0 | | | | |
| S9C | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | 6<br>$140 | | 0<br>$0 | | 0<br>$0 | | | | | 87<br>$3,650 |
| | | 0<br>$0 | | 81<br>$3,510 | | 0<br>$0 | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | | | |
| S9E | 0<br>$0 | | 0<br>$0 | | 10<br>$741 | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | | | | 10<br>$741 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | | | |
| S9G | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | 1<br>$9 | | 0<br>$0 | | 0<br>$0 | | | | | 29<br>$5,085 |
| | | 0<br>$0 | | 0<br>$0 | | 29<br>$5,076 | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | | | |

Table B-22 (Cont'd)

AUTHORIZED VS. ACTUAL SOURCE - NAVY SUMMARY

| ACTUAL SOURCE | AUTHORIZED SOURCE: COC | | LPO | | S9E | S9G | S9I | ICP | GSF | GSS | FAB | WWW | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S9I | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 101<br>$5,945 | | 0<br>$0 | | 0<br>$0 | | 102<br>$5,951 |
| | | 0<br>$0 | | 1<br>$6 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | |
| ICP | 0<br>$0 | | 10<br>$2,946 | | 2<br>$206 | | 52<br>$6,287 | | 0<br>$0 | | 0<br>$0 | | 145<br>$10,569 |
| | | 0<br>$0 | | 9<br>$77 | | 15<br>$198 | | 50<br>$8,464 | | 7<br>$391 | | 0<br>$0 | |
| GSF | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | |
| GSS | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 59<br>$12,969 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 59<br>$12,969 | | 0<br>$0 | |
| FAB | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 1<br>$1,401 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 1<br>$1,401 | |
| DPD | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | |
| FEX | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | |

Table B-22 (Conc'd)

AUTHORIZED VS. ACTUAL SOURCE - NAVY SUMMARY

| ACTUAL SOURCE | AUTHORIZED SOURCE | | | | | | | | | | | | | | | | | | | | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | DOC | | GOC | | LPD | | S9C | | S9E | | S9G | | S9I | | TCP | | GSF | | GSS | | FAB | | WWW | |
| WWW | 0<br>$0 | | | | 0<br>$0 | | | | 0<br>$0 | | | | 0<br>$0 | | | | 0<br>$0 | | | | 0<br>$0 | | | 0<br>$0 |
| | | | 0<br>$0 | | | | 0<br>$0 | | | | 0<br>$0 | | | | 0<br>$0 | | | | 0<br>$0 | | | | 0<br>$0 | |
| LPD | 0<br>$0 | | | | 59<br>$21,134 | | | | 0<br>$0 | | | | 0<br>$0 | | | | 0<br>$0 | | | | 0<br>$0 | | | 59<br>$21,134 |
| | | | 0<br>$0 | | | | 0<br>$0 | | | | 0<br>$0 | | | | 0<br>$0 | | | | 0<br>$0 | | | | 0<br>$0 | |
| OAK | 0<br>$0 | | | | 46<br>$24,305 | | | | 8<br>$212 | | | | 52<br>$1,903 | | | | 0<br>$0 | | | | 0<br>$0 | | | 159<br>$29,296 |
| | | | 2<br>$0 | | | | 16<br>$327 | | | | 29<br>$1,708 | | | | 3<br>$676 | | | | 5<br>$165 | | | | 0<br>$0 | |
| TOT | 0<br>$0 | | | | 3,152<br>$561,642 | | | | 67<br>$2,269 | | | | 581<br>$38,519 | | | | 2<br>$1,658 | | | | 0<br>$0 | | | 4,918<br>$696,948 |
| | | | 0<br>$0 | | | | 478<br>$31,910 | | | | 272<br>$25,231 | | | | 126<br>$12,404 | | | | 228<br>$21,348 | | | | 4<br>$1,959 | |

Table B-23

AUTHORIZED VS. ACTUAL SOURCE - AIR FORCE SUMMARY

| ACTUAL SOURCE | AUTHORIZED SOURCE | | |

Table B-23 (Cont'd)

AUTHORIZED VS. ACTUAL SOURCE - AIR FORCE SUMMARY

| ACTUAL SOURCE | AUTHORIZED SOURCE COC | | LPO | | SPE | | SPI | | GSF | | FAB | | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | GOC | | SPC | | SPG | | ICP | | GSS | | WWW | |
| SPI | 0<br>$0 | | 45<br>$1,351 | | 0<br>$0 | | 1,004<br>$48,695 | | 0<br>$0 | | 1<br>$16 | | 1,051<br>$50,064 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 1<br>$22 | | 0<br>$0 | | 0<br>$0 | |
| ICP | 0<br>$0 | | 32<br>$22,783 | | 3<br>$50 | | 11<br>$334 | | 1<br>$175 | | 0<br>$0 | | 1,035<br>$253,037 |
| | | 0<br>$0 | | 7<br>$378 | | 2<br>$225 | | 955<br>$227,816 | | 24<br>$1,276 | | 0<br>$0 | |
| GSF | 0<br>$0 | | 2<br>$410 | | 0<br>$0 | | 0<br>$0 | | 118<br>$15,090 | | 0<br>$0 | | 121<br>$16,300 |
| | | 0<br>$0 | | 1<br>$800 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | |
| GSS | 0<br>$0 | | 66<br>$96,839 | | 0<br>$0 | | 10<br>$349 | | 12<br>$6,039 | | 0<br>$0 | | 3,321<br>$320,742 |
| | | 0<br>$0 | | 10<br>$611 | | 3<br>$17 | | 2<br>$0 | | 3,218<br>$216,087 | | 0<br>$0 | |
| FAB | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | |
| DPD | 0<br>$0 | | 6<br>$4,607 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 12<br>$8,538 |
| | | 0<br>$0 | | 0<br>$0 | | 1<br>$1,376 | | 0<br>$0 | | 3<br>$579 | | 2<br>$1,976 | |
| FEX | 0<br>$0 | | 212<br>$50,902 | | 48<br>$508 | | 86<br>$1,277 | | 11<br>$1,730 | | 0<br>$0 | | 900<br>$80,554 |
| | | 0<br>$0 | | 179<br>$10,253 | | 136<br>$3,636 | | 38<br>$3,347 | | 190<br>$8,901 | | 0<br>$0 | |

Table B-23 (Cont'd)

AUTHORIZED VS. ACTUAL SOURCE - AIR FORCE SUMMARY

| ACTUAL SOURCE | AUTHORIZED SOURCE: COC | | LPO | | SPE | SPG | SPI | ICP | GSF | GSS | FAB | WWW | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WWW | 0<br>$0 | | 0<br>$0 | | 2<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | |
| LPD | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | |
| OAK | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 3<br>$0 | | 0<br>$0 | |
| TOT | 14,415<br>$1,321,118 | | 16,467<br>$2,239,030 | | 1,854<br>$38,614 | | 6,765<br>$156,370 | | 502<br>$84,126 | | 15<br>$5,796 | | 75,237<br>$5,607,974 |
| | | 4,195<br>$60,764 | | 9,671<br>$404,187 | | 6,766<br>$359,488 | | 2,143<br>$422,113 | | 12,442<br>$514,392 | | 2<br>$1,976 | |

Table B-24

AUTHORIZED VS. ACTUAL SOURCE - MARINE CORPS SUMMARY

| ACTUAL SOURCE | AUTHORIZED SOURCE | | | | | | | | | | | | | | | | | | | | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | COC | | GOC | | LPO | | S9C | | S9E | | S9G | | S9I | | ICP | | GSF | | GSS | | FAB | | WWW | |
| COC | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | |
| GOC | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | |
| STK | 0<br>$0 | | 0<br>$0 | | 3,984<br>$188,504 | | 3,764<br>$57,981 | | 707<br>$6,751 | | 1,756<br>$30,402 | | 2,089<br>$45,069 | | 170<br>$7,713 | | 0<br>$0 | | 848<br>$14,711 | | 0<br>$0 | | 13,158<br>$351,131 |
| LPO | 0<br>$0 | | 0<br>$0 | | 1,612<br>$381,431 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 1,612<br>$381,431 |
| S9C | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 66<br>$2,629 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 66<br>$2,629 |
| S9E | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 31<br>$2,794 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 31<br>$2,794 |
| S9G | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 67<br>$1,898 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 67<br>$1,898 |

Table B-24 (Cont'd)

AUTHORIZED VS. ACTUAL SOURCE - MARINE CORPS SUMMARY

| ACTUAL SOURCE | AUTHORIZED SOURCE | | | | | | | | | | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | COC | GOC | LPO | S9C | S9E | S9G | S9I | ICP | GSF | GSS | FAB | WWW | |
| S9I | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 87<br>$4,176 | | 0<br>$0 | | 0<br>$0 | | 87<br>$4,176 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | |
| ICP | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 31<br>$998 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 31<br>$998 | | 0<br>$0 | | 0<br>$0 | |
| GSF | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | |
| GSS | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 30<br>$13,400 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 30<br>$13,400 | | 0<br>$0 | |
| FAB | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | |
| DPD | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | |
| FEX | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | |

Table B-24 (Cont'd)

AUTHORIZED VS. ACTUAL SOURCE - MARINE CORPS SUMMARY

| ACTUAL SOURCE | AUTHORIZED SOURCE | | | | | | | | | | | | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | COC | | LPD | | S9E | S9G | S91 | | GSF | | FAB | | |
| | | GOC | | S9C | | | | ICP | | GSS | | WWW | |
| WWW | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | |
| LPD | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | |
| OAK | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | |
| TOT | 0<br>$0 | | 5,516<br>$569,935 | | 738<br>$9,545 | | 2,096<br>$49,245 | | 0<br>$0 | | 0<br>$0 | | 15,082<br>$758,457 |
| | | 0<br>$0 | | 3,830<br>$60,610 | | 1,823<br>$32,300 | | 201<br>$8,711 | | 878<br>$28,111 | | 0<br>$0 | |

Table B-25

AUTHORIZED VS. ACTUAL SOURCE - DoD SUMMARY

| ACTUAL SOURCE | AUTHORIZED SOURCE: COC | | LPD | | S9E | S9G | S9I | ICP | GSF | GSS | FAB | WWW | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| COC | 14,407<br>$1,320,407 | | 68<br>$51,330 | | 0<br>$0 | | 5<br>$480 | | 0<br>$0 | | 0<br>$0 | | 14,493<br>$1,373,569 |
| | | 0<br>$0 | | 5<br>$66 | | 6<br>$1,246 | | 0<br>$0 | | 2<br>$40 | | 0<br>$0 | |
| GOC | 0<br>$0 | | 1<br>$4 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 4,196<br>$60,768 |
| | | 4,195<br>$60,764 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | |
| STK | 8<br>$711 | | 23,801<br>$1,562,583 | | 2,287<br>$33,603 | | 8,473<br>$176,112 | | 329<br>$56,066 | | 10<br>$706 | | 68,835<br>$3,144,332 |
| | | 0<br>$0 | | 12,500<br>$381,630 | | 7,686<br>$312,964 | | 1,366<br>$195,722 | | 11,754<br>$359,863 | | 621<br>$64,372 | |
| LPD | 0<br>$0 | | 17,304<br>$3,121,113 | | 5<br>$218 | | 38<br>$4,017 | | 84<br>$8,834 | | 1<br>$5,000 | | 17,792<br>$3,198,698 |
| | | 0<br>$0 | | 128<br>$17,694 | | 44<br>$18,207 | | 19<br>$3,090 | | 149<br>$19,275 | | 20<br>$1,242 | |
| S9C | 0<br>$0 | | 167<br>$62,830 | | 0<br>$0 | | 12<br>$244 | | 5<br>$637 | | 3<br>$74 | | 2,263<br>$283,182 |
| | | 0<br>$0 | | 1,753<br>$197,039 | | 5<br>$334 | | 0<br>$0 | | 89<br>$12,724 | | 229<br>$9,300 | |
| S9E | 0<br>$0 | | 19<br>$1,992 | | 316<br>$16,261 | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | 402<br>$22,353 |
| | | 0<br>$0 | | 3<br>$562 | | 0<br>$0 | | 2<br>$59 | | 7<br>$519 | | 55<br>$2,960 | |
| S9G | 0<br>$0 | | 272<br>$25,939 | | 2<br>$113 | | 2<br>$11 | | 0<br>$0 | | 0<br>$0 | | 1,660<br>$161,053 |
| | | 0<br>$0 | | 0<br>$0 | | 1,269<br>$108,307 | | 3<br>$3,034 | | 40<br>$19,601 | | 72<br>$4,048 | |

Table B-25 (Cont'd)

AUTHORIZED VS. ACTUAL SOURCE - DoD SUMMARY

| ACTUAL SOURCE | AUTHORIZED SOURCE | | | | | | | | | | | | | | | | | | | | | | | | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | COC | | LPO | | S9E | | S91 | | GSF | | FAB | | | | | | | | | | | | | | |
| | GOC | | S9C | | S9G | | ICP | | GSS | | WWW | | | | | | | | | | | | | | |
| S91 | 0 | | 45 | | 0 | | 1,339 | | 0 | | 1 | | | | | | | | | | | | | | 1,523 |
| | $0 | | $1,351 | | $0 | | $81,000 | | $0 | | $16 | | | | | | | | | | | | | | $92,491 |
| | 0 | | 1 | | 0 | | 1 | | 1 | | 135 | | | | | | | | | | | | | | |
| | $0 | | $6 | | $0 | | $22 | | $16 | | $10,000 | | | | | | | | | | | | | | |
| ICP | 0 | | 42 | | 5 | | 64 | | 1 | | 0 | | | | | | | | | | | | | | 1,237 |
| | $0 | | $25,729 | | $256 | | $6,810 | | $175 | | $0 | | | | | | | | | | | | | | $294,347 |
| | 0 | | 16 | | 17 | | 1,060 | | 32 | | 0 | | | | | | | | | | | | | | |
| | $0 | | $455 | | $423 | | $258,738 | | $1,761 | | $0 | | | | | | | | | | | | | | |
| GSF | 0 | | 2 | | 0 | | 0 | | 195 | | 0 | | | | | | | | | | | | | | 198 |
| | $0 | | $410 | | $0 | | $0 | | $57,643 | | $0 | | | | | | | | | | | | | | $58,933 |
| | 0 | | 1 | | 0 | | 0 | | 0 | | 0 | | | | | | | | | | | | | | |
| | $0 | | $800 | | $0 | | $0 | | $0 | | $0 | | | | | | | | | | | | | | |
| GSS | 0 | | 66 | | 0 | | 10 | | 12 | | 0 | | | | | | | | | | | | | | 4,663 |
| | $0 | | $96,839 | | $0 | | $349 | | $6,839 | | $0 | | | | | | | | | | | | | | $653,503 |
| | 0 | | 10 | | 3 | | 2 | | 4,546 | | 14 | | | | | | | | | | | | | | |
| | $0 | | $611 | | $17 | | $0 | | $541,702 | | $7,146 | | | | | | | | | | | | | | |
| FAB | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | | | | | | | | | | | | | 1 |
| | $0 | | $0 | | $0 | | $0 | | $0 | | $0 | | | | | | | | | | | | | | $1,401 |
| | 0 | | 0 | | 0 | | 0 | | 0 | | 1 | | | | | | | | | | | | | | |
| | $0 | | $0 | | $0 | | $0 | | $0 | | $1,401 | | | | | | | | | | | | | | |
| DPD | 0 | | 6 | | 0 | | 0 | | 0 | | 0 | | | | | | | | | | | | | | 12 |
| | $0 | | $4,607 | | $0 | | $0 | | $0 | | $0 | | | | | | | | | | | | | | $8,538 |
| | 0 | | 0 | | 1 | | 0 | | 3 | | 2 | | | | | | | | | | | | | | |
| | $0 | | $0 | | $1,376 | | $0 | | $579 | | $1,976 | | | | | | | | | | | | | | |
| FEX | 0 | | 219 | | 48 | | 86 | | 11 | | 0 | | | | | | | | | | | | | | 907 |
| | $0 | | $52,112 | | $508 | | $1,277 | | $1,730 | | $0 | | | | | | | | | | | | | | $81,764 |
| | 0 | | 179 | | 136 | | 38 | | 190 | | 0 | | | | | | | | | | | | | | |
| | $0 | | $10,253 | | $3,636 | | $3,347 | | $8,901 | | $0 | | | | | | | | | | | | | | |

Table B-25 (Cont'd)

AUTHORIZED VS. ACTUAL SOURCE - DoD SUMMARY

| ACTUAL SOURCE | AUTHORIZED SOURCE | | | | | | | | | | | | | | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | COC | | LPO | | S9E | S9I | | GSF | | FAB | | | | | |
| | GOC | S9C | | | S9G | ICP | | GSS | | WWW | | | | | |
| WWW | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | | | | 28<br>$26,787 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | 0<br>$0 | | 0<br>$0 | | 28<br>$26,787 | | | | |
| LPD | 0<br>$0 | | 59<br>$21,134 | | 0<br>$0 | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | | | | 59<br>$21,134 |
| | | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | 0<br>$0 | | 0<br>$0 | | 0<br>$0 | | | | |
| OAK | 0<br>$0 | | 46<br>$24,305 | | 8<br>$212 | 52<br>$1,903 | | 0<br>$0 | | 0<br>$0 | | | | | 159<br>$29,296 |
| | | 0<br>$0 | | 16<br>$327 | | 29<br>$1,708 | 3<br>$676 | | 5<br>$165 | | 0<br>$0 | | | | |
| TOT | 14,415<br>$1,321,118 | | 42,117<br>$5,052,278 | | 2,671<br>$51,171 | 10,081<br>$272,203 | | 637<br>$131,924 | | 15<br>$5,796 | | | | | 118,428<br>$9,512,141 |
| | | 4,195<br>$60,764 | | 14,612<br>$609,523 | | 9,196<br>$448,218 | 2,494<br>$464,688 | | 16,818<br>$965,146 | | 1,177<br>$129,312 | | | | |

Tables B-26 through B-33 show, for selected installations, responsiveness based on the time period beginning when the civil engineer established that a requirement existed for a particular item and ending when the civil engineer actually had that item in his possession. These responsiveness analyses show both number and dollar value of receipts as a total of all priority groups. For each installation this data is shown in terms of variable day categories for each actual source. Table B-26 shows responsiveness at Fort Bragg. Table B-27 shows responsiveness at New Cumberland Army Depot. Table B-28 shows responsiveness at Public Works Center Norfolk. Table B-29 shows responsivnesss at Cannon Air Force Base. Table B-30 shows responsiveness at Dover Air Force Base. Table B-31 shows responsiveness at Hurlburt Field. Table B-32 shows responsiveness at Offutt Air Force Base. Table B-33 shows responsiveness at Camp Lejeune.

## Table B-26

RESPONSIVENESS: REQUIREMENT DATE TO RECEIPT DATE BY ACTUAL SOURCE--FORT BRAGG

| TIME INTERVAL | ACTUAL SOURCE: CDC # RECORDS / $ VALUE | SDC # RECORDS / $ VALUE | LPD STK # RECORDS / $ VALUE | ICP STK # RECORDS / $ VALUE | OTH STK # RECORDS / $ VALUE | LPO # RECORDS / $ VALUE | LPD # RECORDS / $ VALUE | SSC # RECORDS / $ VALUE |
|---|---|---|---|---|---|---|---|---|
| 1-1 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 97<br>$ 20,209 | 0<br>$ 0 | 0<br>$ 0 |
| 2-7 DY | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 432<br>$ 75,649 | 0<br>$ 0 | 0<br>$ 0 |
| 8-11 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 130<br>$ 27,358 | 0<br>$ 0 | 0<br>$ 0 |
| 12 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 13<br>$ 3,472 | 0<br>$ 0 | 0<br>$ 0 |
| 13-15 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 92<br>$ 14,849 | 0<br>$ 0 | 0<br>$ 0 |
| 16 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 12<br>$ 2,412 | 0<br>$ 0 | 0<br>$ 0 |
| 17-29 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 183<br>$ 36,127 | 0<br>$ 0 | 1<br>$ 39,521 |
| 30-66 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 410<br>$ 173,328 | 0<br>$ 0 | 1<br>$ 1,991 |
| 67-71 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 45<br>$ 12,337 | 0<br>$ 0 | 0<br>$ 0 |
| 72-81 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 34<br>$ 14,165 | 0<br>$ 0 | 2<br>$ 3,815 |
| OVER 81 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 253<br>$ 46,233 | 0<br>$ 0 | 11<br>$ 32,579 |
| OVER 90 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 228<br>$ 37,436 | 0<br>$ 0 | 10<br>$ 30,890 |
| OVER 120 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 135<br>$ 23,797 | 0<br>$ 0 | 1<br>$ 621 |
| OVER 150 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 96<br>$ 19,741 | 0<br>$ 0 | 0<br>$ 0 |
| OVER 180 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 85<br>$ 17,728 | 0<br>$ 0 | 0<br>$ 0 |
| TOTAL | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 1,701<br>$ 426,131 | 0<br>$ 0 | 15<br>$ 77,186 |

Table B-26 (Cont'd)

RESPONSIVENESS: REQUIREMENT DATE TO RECEIPT DATE BY ACTUAL SOURCE--FORT BRAGG

| TIME INTERVAL | ACTUAL SOURCE: SQE # RECORDS / $ VALUE | SQG # RECORDS / $ VALUE | SQI # RECORDS / $ VALUE | ICP # RECORDS / $ VALUE | GSF # RECORDS / $ VALUE | GSS # RECORDS / $ VALUE | FAB # RECORDS / $ VALUE | DPD # RECORDS / $ VALUE |
|---|---|---|---|---|---|---|---|---|
| 0-1 | 0 / $ 0 | 0 / $ 0 | 0 / $ 0 | 0 / $ 0 | 0 / $ 0 | 0 / $ 0 | 0 / $ 0 | 0 / $ 0 |
| 2-7 | 0 / $ 0 | 0 / $ 0 | 0 / $ 0 | 0 / $ 0 | 1 / $ 65 | 0 / $ 0 | 0 / $ 0 | 0 / $ 0 |
| 8-11 | 0 / $ 0 | 0 / $ 0 | 0 / $ 0 | 0 / $ 0 | 6 / $ 1,136 | 0 / $ 0 | 0 / $ 0 | 0 / $ 0 |
| 12 | 0 / $ 0 | 0 / $ 0 | 0 / $ 0 | 0 / $ 0 | 5 / $ 5,454 | 0 / $ 0 | 0 / $ 0 | 0 / $ 0 |
| 13-15 | 0 / $ 0 | 0 / $ 0 | 0 / $ 0 | 0 / $ 0 | 5 / $ 640 | 1 / $ 51 | 0 / $ 0 | 0 / $ 0 |
| 16 | 0 / $ 0 | 0 / $ 0 | 0 / $ 0 | 0 / $ 0 | 0 / $ 0 | 0 / $ 0 | 0 / $ 0 | 0 / $ 0 |
| 17-29 | 0 / $ 0 | 0 / $ 0 | 0 / $ 0 | 0 / $ 0 | 13 / $ 11,272 | 32 / $ 14,969 | 0 / $ 0 | 0 / $ 0 |
| 30-66 | 0 / $ 0 | 0 / $ 0 | 0 / $ 0 | 0 / $ 0 | 21 / $ 10,037 | 85 / $ 25,666 | 0 / $ 0 | 0 / $ 0 |
| 67-71 | 0 / $ 0 | 0 / $ 0 | 0 / $ 0 | 0 / $ 0 | 2 / $ 594 | 5 / $ 522 | 0 / $ 0 | 0 / $ 0 |
| 72-81 | 0 / $ 0 | 0 / $ 0 | 0 / $ 0 | 0 / $ 0 | 17 / $ 10,156 | 4 / $ 6,498 | 0 / $ 0 | 0 / $ 0 |
| OVER 81 | 0 / $ 0 | 0 / $ 0 | 0 / $ 0 | 0 / $ 0 | 7 / $ 3,199 | 64 / $ 33,308 | 0 / $ 0 | 0 / $ 0 |
| OVER 92 | 0 / $ 0 | 0 / $ 0 | 0 / $ 0 | 0 / $ 0 | 7 / $ 3,199 | 58 / $ 31,115 | 0 / $ 0 | 0 / $ 0 |
| OVER 127 | 0 / $ 0 | 0 / $ 0 | 0 / $ 0 | 0 / $ 0 | 0 / $ 0 | 43 / $ 24,853 | 0 / $ 0 | 0 / $ 0 |
| OVER 157 | 0 / $ 0 | 0 / $ 0 | 0 / $ 0 | 0 / $ 0 | 0 / $ 0 | 25 / $ 23,189 | 0 / $ 0 | 0 / $ 0 |
| OVER 188 | 0 / $ 0 | 0 / $ 0 | 0 / $ 0 | 0 / $ 0 | 0 / $ 0 | 16 / $ 9,837 | 0 / $ 0 | 0 / $ 0 |
| TOTAL | 0 / $ 0 | 0 / $ 0 | 0 / $ 0 | 0 / $ 0 | 77 / $ 42,553 | 191 / $ 81,814 | 0 / $ 0 | 0 / $ 0 |

Table B-26 (Cont'd)

RESPONSIVENESS: REQUIREMENT DATE TO RECEIPT DATE BY ACTUAL SOURCE--FORT BRAGG

| TIME INTERVAL | ACTUAL SOURCE OAK # RECORDS / $ VALUE | LPO FEX # RECORDS / $ VALUE | TCP FEX # RECORDS / $ VALUE | OTH FEX # RECORDS / $ VALUE | WWW # RECORDS / $ VALUE | TOTAL # RECORDS / $ VALUE |
|---|---|---|---|---|---|---|
| 0-1 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 97<br>$ 20,289 |
| 2-7 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 433<br>$ 75,714 |
| 8-11 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 136<br>$ 28,486 |
| 12 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 18<br>$ 8,926 |
| 13-15 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 98<br>$ 15,540 |
| 16 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 12<br>$ 2,412 |
| 17-28 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 229<br>$ 101,889 |
| 29-66 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 517<br>$ 211,022 |
| 67-71 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 52<br>$ 13,453 |
| 72-91 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 57<br>$ 33,834 |
| OVER 91 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 335<br>$ 115,319 |
| OVER 90 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 303<br>$ 102,648 |
| OVER 123 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 179<br>$ 49,271 |
| OVER 150 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 121<br>$ 39,937 |
| OVER 180 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 101<br>$ 26,765 |
| TOTAL | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 1,984<br>$ 626,804 |

Table B-27

RESPONSIVENESS: REQUIREMENT DATE TO RECEIPT DATE BY ACTUAL SOURCE --NEW CUMBERLAND ARMY DEPOT

| TIME INTERVAL | ACTUAL SOURCE CDC # RECORDS / $ VALUE | GDC # RECORDS / $ VALUE | LPO STK # RECORDS / $ VALUE | ICP STK # RECORDS / $ VALUE | OTH STK # RECORDS / $ VALUE | LPO # RECORDS / $ VALUE | LPD # RECORDS / $ VALUE | SSC # RECORDS / $ VALUE |
|---|---|---|---|---|---|---|---|---|
| 0-1 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 1<br>$ 6 | 0<br>$ 0 | 1<br>$ 50 | 0<br>$ 0 | 3<br>$ 125 |
| 2-7 | 0<br>$ 0 | 0<br>$ 0 | 12<br>$ 1,204 | 6<br>$ 61 | 3<br>$ 116 | 14<br>$ 1,931 | 0<br>$ 0 | 1<br>$ 14 |
| 8-11 | 0<br>$ 0 | 0<br>$ 0 | 4<br>$ 934 | 4<br>$ 76 | 12<br>$ 863 | 8<br>$ 1,318 | 0<br>$ 0 | 0<br>$ 0 |
| 12 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 1<br>$ 4 | 2<br>$ 13 | 1<br>$ 1 | 0<br>$ 0 | 1<br>$ 9 |
| 13-15 | 0<br>$ 0 | 0<br>$ 0 | 15<br>$ 1,605 | 6<br>$ 53 | 3<br>$ 51 | 24<br>$ 2,598 | 0<br>$ 0 | 2<br>$ 48 |
| 16 | 0<br>$ 0 | 0<br>$ 0 | 1<br>$ 18 | 0<br>$ 0 | 0<br>$ 0 | 2<br>$ 587 | 0<br>$ 0 | 1<br>$ 25 |
| 17-29 | 0<br>$ 0 | 0<br>$ 0 | 34<br>$ 10,643 | 8<br>$ 117 | 2<br>$ 53 | 112<br>$ 5,081 | 0<br>$ 0 | 4<br>$ 63 |
| 30-66 | 0<br>$ 0 | 0<br>$ 0 | 53<br>$ 4,642 | 4<br>$ 41 | 7<br>$ 85 | 311<br>$ 22,162 | 0<br>$ 0 | 36<br>$ 198 |
| 67-71 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 18<br>$ 618 | 0<br>$ 0 | 0<br>$ 0 |
| 72-81 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 17<br>$ 4,834 | 0<br>$ 0 | 0<br>$ 0 |
| OVER 81 | 0<br>$ 0 | 0<br>$ 0 | 13<br>$ 962 | 3<br>$ 5 | 2<br>$ 29 | 55<br>$ 4,218 | 0<br>$ 0 | 2<br>$ 728 |
| OVER 90 | 0<br>$ 0 | 0<br>$ 0 | 10<br>$ 850 | 1<br>$ 3 | 2<br>$ 29 | 47<br>$ 3,781 | 0<br>$ 0 | 1<br>$ 9 |
| OVER 120 | 0<br>$ 0 | 0<br>$ 0 | 1<br>$ 6 | 1<br>$ 3 | 2<br>$ 29 | 21<br>$ 1,215 | 0<br>$ 0 | 1<br>$ 9 |
| OVER 150 | 0<br>$ 0 | 0<br>$ 0 | 1<br>$ 6 | 1<br>$ 3 | 2<br>$ 29 | 18<br>$ 872 | 0<br>$ 0 | 1<br>$ 9 |
| OVER 180 | 0<br>$ 0 | 0<br>$ 0 | 1<br>$ 6 | 1<br>$ 3 | 1<br>$ 3 | 9<br>$ 655 | 0<br>$ 0 | 1<br>$ 9 |
| TOTAL | 0<br>$ 0 | 0<br>$ 0 | 132<br>$ 28,888 | 33<br>$ 363 | 31<br>$ 1,218 | 563<br>$ 43,318 | 0<br>$ 0 | 58<br>$ 1,202 |

Table B-27 (Cont'd)

RESPONSIVENESS: REQUIREMENT DATE TO RECEIPT DATE BY ACTUAL SOURCE --NEW CUMBERLAND ARMY DEPOT

| TIME INTERVAL | ACTUAL SOURCE SQF # RECORDS / $ VALUE | SQG # RECORDS / $ VALUE | SQI # RECORDS / $ VALUE | ICP # RECORDS / $ VALUE | GSF # RECORDS / $ VALUE | GSS # RECORDS / $ VALUE | FAB # RECORDS / $ VALUE | DPD # RECORDS / $ VALUE |
|---|---|---|---|---|---|---|---|---|
| 0-1 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 |
| 2-7 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 1<br>$ 5 | 0<br>$ 0 | 0<br>$ 0 |
| 8-11 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 2<br>$ 187 | 0<br>$ 0 | 0<br>$ 0 |
| 12 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 |
| 13-15 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 1<br>$ 88 | 0<br>$ 0 | 0<br>$ 0 |
| 16 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 |
| 17-25 | 0<br>$ 0 | 2<br>$ 52 | 1<br>$ 27 | 0<br>$ 0 | 0<br>$ 0 | 2<br>$ 131 | 0<br>$ 0 | 0<br>$ 0 |
| 26-66 | 0<br>$ 0 | 12<br>$ 3,306 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 27<br>$ 881 | 0<br>$ 0 | 0<br>$ 0 |
| 67-71 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 2<br>$ 17 | 0<br>$ 0 | 0<br>$ 0 |
| 72-81 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 2<br>$ 322 | 0<br>$ 0 | 0<br>$ 0 |
| OVER 81 | 0<br>$ 0 | 0<br>$ 0 | 2<br>$ 13 | 1<br>$ 18,432 | 0<br>$ 0 | 17<br>$ 592 | 0<br>$ 0 | 0<br>$ 0 |
| OVER 90 | 0<br>$ 0 | 0<br>$ 0 | 2<br>$ 13 | 1<br>$ 18,432 | 0<br>$ 0 | 17<br>$ 592 | 0<br>$ 0 | 0<br>$ 0 |
| OVER 120 | 0<br>$ 0 | 0<br>$ 0 | 1<br>$ 5 | 0<br>$ 0 | 0<br>$ 0 | 9<br>$ 163 | 0<br>$ 0 | 0<br>$ 0 |
| OVER 150 | 0<br>$ 0 | 0<br>$ 0 | 1<br>$ 5 | 0<br>$ 0 | 0<br>$ 0 | 6<br>$ 123 | 0<br>$ 0 | 0<br>$ 0 |
| OVER 180 | 0<br>$ 0 | 0<br>$ 0 | 1<br>$ 5 | 0<br>$ 0 | 0<br>$ 0 | 6<br>$ 123 | 0<br>$ 0 | 0<br>$ 0 |
| TOTAL | 0<br>$ 0 | 14<br>$ 3,359 | 3<br>$ 40 | 1<br>$ 18,432 | 0<br>$ 0 | 54<br>$ 2,223 | 0<br>$ 0 | 0<br>$ 0 |

Table B-27 (Cont'd)

RESPONSIVENESS: REQUIREMENT DATE TO RECEIPT DATE BY ACTUAL SOURCE--NEW CUMBERLAND ARMY DEPOT

| TIME INTERVAL | ACTUAL SOURCE OAK # RECORDS / $ VALUE | LPO FEX # RECORDS / $ VALUE | ICP FEX # RECORDS / $ VALUE | OTH FEX # RECORDS / $ VALUE | WWW # RECORDS / $ VALUE | TOTAL # RECORDS / $ VALUE |
|---|---|---|---|---|---|---|
| 0-1 | 0 | 0 | 0 | 0 | 0 | 5 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 181 |
| 2-7 | 0 | 0 | 0 | 0 | 0 | 37 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 3,411 |
| 8-11 | 0 | 0 | 0 | 0 | 0 | 30 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 3,378 |
| 12 | 0 | 0 | 0 | 0 | 0 | 5 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 27 |
| 13-15 | 0 | 0 | 0 | 0 | 0 | 51 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 4,443 |
| 16 | 0 | 0 | 0 | 0 | 0 | 4 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 550 |
| 17-25 | 0 | 0 | 0 | 0 | 0 | 165 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 16,167 |
| 26-66 | 0 | 0 | 0 | 0 | 0 | 450 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 31,307 |
| 67-71 | 0 | 0 | 0 | 0 | 0 | 20 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 635 |
| 72-81 | 0 | 0 | 0 | 0 | 0 | 19 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 5,156 |
| OVER 81 | 0 | 0 | 0 | 0 | 0 | 95 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 24,979 |
| OVER 90 | 0 | 0 | 0 | 0 | 0 | 81 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 23,709 |
| OVER 120 | 0 | 0 | 0 | 0 | 0 | 36 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 1,430 |
| OVER 150 | 0 | 0 | 0 | 0 | 0 | 22 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 1,047 |
| OVER 180 | 0 | 0 | 0 | 0 | 0 | 20 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 804 |
| TOTAL | 0 | 0 | 0 | 0 | 0 | 881 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 90,234 |

Table B-28

RESPONSIVENESS: REQUIREMENT DATE TO RECEIPT DATE BY ACTUAL SOURCE--PUBLIC WORKS CENTER NORFOLK

| TIME INTERVAL | ACTUAL SOURCE: GOC # RECORDS / $ VALUE | GOC # RECORDS / $ VALUE | LPO STK # RECORDS / $ VALUE | ICP STK # RECORDS / $ VALUE | OTH STK # RECORDS / $ VALUE | LPO # RECORDS / $ VALUE | LPD # RECORDS / $ VALUE | SPC # RECORDS / $ VALUE |
|---|---|---|---|---|---|---|---|---|
| 7-1 | 0 | 0 | 6 | 43 | 14 | 423 | 0 | 0 |
| | $ 0 | $ 0 | $ 1,646 | $ 9,815 | $ 1,167 | $ 20,316 | $ 0 | $ 0 |
| 2-7 | 0 | 0 | 5 | 76 | 12 | 692 | 0 | 0 |
| | $ 0 | $ 0 | $ 399 | $ 4,621 | $ 1,056 | $ 46,121 | $ 0 | $ 0 |
| 8-11 | 0 | 0 | 0 | 46 | 22 | 244 | 0 | 0 |
| | $ 0 | $ 0 | $ 0 | $ 2,781 | $ 301 | $ 21,600 | $ 0 | $ 0 |
| 12 | 0 | 0 | 0 | 15 | 15 | 35 | 0 | 0 |
| | $ 0 | $ 0 | $ 0 | $ 3,199 | $ 61 | $ 1,814 | $ 0 | $ 0 |
| 13-15 | 0 | 0 | 0 | 66 | 2 | 128 | 0 | 0 |
| | $ 0 | $ 0 | $ 0 | $ 1,939 | $ 16 | $ 18,401 | $ 0 | $ 0 |
| 16 | 0 | 0 | 2 | 30 | 4 | 7 | 0 | 0 |
| | $ 0 | $ 0 | $ 44 | $ 689 | $ 96 | $ 856 | $ 0 | $ 0 |
| 17-29 | 0 | 0 | 0 | 97 | 16 | 321 | 0 | 15 |
| | $ 0 | $ 0 | $ 0 | $ 4,558 | $ 2,038 | $ 41,496 | $ 0 | $ 429 |
| 30-66 | 0 | 0 | 0 | 11 | 5 | 458 | 0 | 51 |
| | $ 0 | $ 0 | $ 0 | $ 996 | $ 367 | $ 76,060 | $ 0 | $ 2,600 |
| 67-71 | 0 | 0 | 0 | 0 | 0 | 44 | 0 | 0 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 2,734 | $ 0 | $ 0 |
| 72-81 | 0 | 0 | 0 | 0 | 0 | 70 | 0 | 0 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 84,662 | $ 0 | $ 0 |
| OVER 81 | 0 | 0 | 0 | 5 | 4 | 142 | 0 | 3 |
| | $ 0 | $ 0 | $ 0 | $ 294 | $ 108 | $ 112,324 | $ 0 | $ 89 |
| OVER 97 | 0 | 0 | 0 | 5 | 4 | 116 | 0 | 2 |
| | $ 0 | $ 0 | $ 0 | $ 294 | $ 108 | $ 108,976 | $ 0 | $ 60 |
| OVER 120 | 0 | 0 | 0 | 4 | 0 | 47 | 0 | 1 |
| | $ 0 | $ 0 | $ 0 | $ 240 | $ 0 | $ 79,932 | $ 0 | $ 53 |
| OVER 153 | 0 | 0 | 0 | 3 | 0 | 31 | 0 | 0 |
| | $ 0 | $ 0 | $ 0 | $ 226 | $ 0 | $ 12,879 | $ 0 | $ 0 |
| OVER 180 | 0 | 0 | 0 | 3 | 0 | 20 | 0 | 0 |
| | $ 0 | $ 0 | $ 0 | $ 226 | $ 0 | $ 11,545 | $ 0 | $ 0 |
| TOTAL | 0 | 0 | 13 | 389 | 94 | 2,564 | 0 | 69 |
| | $ 0 | $ 0 | $ 2,289 | $ 28,892 | $ 5,210 | $ 426,392 | $ 0 | $ 3,118 |

Table B-28 (Cont'd)

RESPONSIVENESS: REQUIREMENT DATE TO RECEIPT DATE BY ACTUAL SOURCE--PUBLIC WORKS CENTER NORFOLK

| TIME INTERVAL | ACTUAL SOURCE SOE # RECORDS / $ VALUE | SOG # RECORDS / $ VALUE | SOI # RECORDS / $ VALUE | ICP # RECORDS / $ VALUE | GSF # RECORDS / $ VALUE | GSS # RECORDS / $ VALUE | FAB # RECORDS / $ VALUE | DPD # RECORDS / $ VALUE |
|---|---|---|---|---|---|---|---|---|
| 0-1 | 0<br>$ 0 | 0<br>$ 0 | 1<br>$ 203 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 |
| 2-7 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 |
| 8-11 | 0<br>$ 0 | 1<br>$ 216 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 |
| 12 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 |
| 13-15 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 |
| 16 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 |
| 17-28 | 5<br>$ 237 | 7<br>$ 355 | 16<br>$ 1,015 | 23<br>$ 773 | 0<br>$ 0 | 7<br>$ 473 | 0<br>$ 0 | 0<br>$ 0 |
| 29-66 | 3<br>$ 4 | 12<br>$ 2,713 | 37<br>$ 3,062 | 34<br>$ 3,025 | 0<br>$ 0 | 27<br>$ 2,100 | 0<br>$ 0 | 0<br>$ 0 |
| 67-71 | 0<br>$ 0 | 1<br>$ 1,500 | 0<br>$ 0 | 1<br>$ 179 | 0<br>$ 0 | 4<br>$ 2,446 | 0<br>$ 0 | 0<br>$ 0 |
| 72-81 | 0<br>$ 0 | 0<br>$ 0 | 2<br>$ 70 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 |
| OVER 81 | 0<br>$ 0 | 2<br>$ 123 | 6<br>$ 705 | 9<br>$ 5,669 | 0<br>$ 0 | 10<br>$ 1,824 | 0<br>$ 0 | 0<br>$ 0 |
| OVER 90 | 0<br>$ 0 | 2<br>$ 123 | 6<br>$ 705 | 7<br>$ 5,627 | 0<br>$ 0 | 17<br>$ 1,793 | 0<br>$ 0 | 0<br>$ 0 |
| OVER 120 | 0<br>$ 0 | 1<br>$ 32 | 3<br>$ 675 | 4<br>$ 5,307 | 0<br>$ 0 | 12<br>$ 521 | 0<br>$ 0 | 0<br>$ 0 |
| OVER 150 | 0<br>$ 0 | 1<br>$ 32 | 1<br>$ 451 | 3<br>$ 5,223 | 0<br>$ 0 | 1<br>$ 7 | 0<br>$ 0 | 0<br>$ 0 |
| OVER 180 | 0<br>$ 0 | 0<br>$ 0 | 1<br>$ 451 | 3<br>$ 5,223 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 |
| TOTAL | 8<br>$ 241 | 23<br>$ 4,907 | 62<br>$ 5,855 | 67<br>$ 9,646 | 0<br>$ 0 | 56<br>$ 6,843 | 0<br>$ 0 | 0<br>$ 0 |

Table B-28 (Cont'd)

RESPONSIVENESS: REQUIREMENT DATE TO RECEIPT DATE BY ACTUAL SOURCE--PUBLIC WORKS CENTER NORFOLK

| TIME INTERVAL | ACTUAL SOURCE OAK # RECORDS / $ VALUE | LPD FEX # RECORDS / $ VALUE | ICP FEX # RECORDS / $ VALUE | OTH FEX # RECORDS / $ VALUE | WWW # RECORDS / $ VALUE | TOTAL # RECORDS / $ VALUE |
|---|---|---|---|---|---|---|
| 0-1 | 0 | 0 | 0 | 0 | 0 | 487 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 33,147 |
| 2-7 | 0 | 0 | 0 | 0 | 0 | 785 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 52,197 |
| 8-11 | 0 | 0 | 0 | 0 | 0 | 313 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 24,906 |
| 12 | 0 | 0 | 0 | 0 | 0 | 65 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 5,074 |
| 13-15 | 0 | 0 | 0 | 0 | 0 | 196 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 20,356 |
| 16 | 0 | 0 | 0 | 0 | 0 | 43 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 1,635 |
| 17-28 | 0 | 0 | 0 | 0 | 0 | 507 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 51,374 |
| 29-66 | 0 | 0 | 0 | 0 | 0 | 638 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 90,927 |
| 67-71 | 0 | 0 | 0 | 0 | 0 | 50 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 6,859 |
| 72-81 | 0 | 0 | 0 | 0 | 0 | 72 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 84,732 |
| OVER 81 | 0 | 0 | 0 | 0 | 0 | 189 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 121,136 |
| OVER 90 | 0 | 0 | 0 | 0 | 0 | 159 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 117,696 |
| OVER 120 | 0 | 0 | 0 | 0 | 0 | 72 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 86,760 |
| OVER 150 | 0 | 0 | 0 | 0 | 0 | 40 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 18,818 |
| OVER 180 | 0 | 0 | 0 | 0 | 0 | 27 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 17,445 |
| TOTAL | 0 | 0 | 0 | 0 | 0 | 3,345 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 492,393 |

Table B-29

RESPONSIVENESS: REQUIREMENT DATE TO RECEIPT DATE BY ACTUAL SOURCE--CANNON AIR FORCE BASE

| TIME INTERVAL | ACTUAL SOURCE: CRC # RECORDS / $ VALUE | SRC # RECORDS / $ VALUE | LPD STK # RECORDS / $ VALUE | ICP STK # RECORDS / $ VALUE | OTH STK # RECORDS / $ VALUE | LPD # RECORDS / $ VALUE | LPD # RECORDS / $ VALUE | SRC # RECORDS / $ VALUE |
|---|---|---|---|---|---|---|---|---|
| 0-1 | 8<br>$ 1,895 | 0<br>$ 0 | 112<br>$ 17,715 | 1,419<br>$ 31,144 | 329<br>$ 12,275 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 |
| 2-7 | 210<br>$ 15,934 | 0<br>$ 0 | 56<br>$ 6,904 | 252<br>$ 4,864 | 83<br>$ 2,043 | 2<br>$ 370 | 0<br>$ 0 | 0<br>$ 0 |
| 8-11 | 123<br>$ 12,328 | 0<br>$ 0 | 3<br>$ 29 | 51<br>$ 1,088 | 17<br>$ 149 | 2<br>$ 428 | 0<br>$ 0 | 5<br>$ 634 |
| 12 | 34<br>$ 1,088 | 0<br>$ 0 | 0<br>$ 0 | 11<br>$ 107 | 5<br>$ 550 | 0<br>$ 0 | 0<br>$ 0 | 2<br>$ 43 |
| 13-15 | 146<br>$ 37,328 | 0<br>$ 0 | 1<br>$ 6 | 37<br>$ 595 | 13<br>$ 103 | 2<br>$ 103 | 0<br>$ 0 | 24<br>$ 269 |
| 16 | 48<br>$ 7,605 | 0<br>$ 0 | 0<br>$ 0 | 5<br>$ 26 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 2<br>$ 1 |
| 17-29 | 427<br>$ 46,023 | 0<br>$ 0 | 10<br>$ 374 | 67<br>$ 1,391 | 27<br>$ 156 | 2<br>$ 333 | 0<br>$ 0 | 65<br>$ 774 |
| 30-66 | 218<br>$ 50,519 | 0<br>$ 0 | 5<br>$ 359 | 4[illegible]<br>$ 4[illegible] | 49<br>$ 499 | 40<br>$ 5,078 | 0<br>$ 0 | 43<br>$ 1,862 |
| 67-71 | 2<br>$ 28 | 0<br>$ 0 | 1<br>$ 37 | 2<br>$ 4 | 3<br>$ 50 | 5<br>$ 2,919 | 0<br>$ 0 | 0<br>$ 0 |
| 72-81 | 11<br>$ 1,949 | 0<br>$ 0 | 0<br>$ 0 | 2<br>$ 456 | 9<br>$ 48 | 12<br>$ 7,198 | 0<br>$ 0 | 6<br>$ 482 |
| OVER 81 | 4<br>$ 585 | 0<br>$ 0 | 7<br>$ 6,421 | 17<br>$ 433 | 47<br>$ 714 | 23<br>$ 8,246 | 0<br>$ 0 | 3<br>$ 14 |
| OVER 90 | 4<br>$ 585 | 0<br>$ 0 | 6<br>$ 4,559 | 14<br>$ 209 | 41<br>$ 448 | 22<br>$ 8,240 | 0<br>$ 0 | 3<br>$ 14 |
| OVER 120 | 4<br>$ 585 | 0<br>$ 0 | 5<br>$ 4,229 | 9<br>$ 174 | 19<br>$ 210 | 15<br>$ 6,992 | 0<br>$ 0 | 1<br>$ 4 |
| OVER 150 | 4<br>$ 585 | 0<br>$ 0 | 5<br>$ 4,229 | 5<br>$ 23 | 6<br>$ 108 | 9<br>$ 6,878 | 0<br>$ 0 | 0<br>$ 0 |
| OVER 180 | 4<br>$ 585 | 0<br>$ 0 | 5<br>$ 4,229 | 5<br>$ 23 | 4<br>$ 65 | 8<br>$ 6,871 | 0<br>$ 0 | 0<br>$ 0 |
| TOTAL | 1,231<br>$ 175,282 | 0<br>$ 0 | 195<br>$ 31,845 | 1,983<br>$ 40,510 | 582<br>$ 16,587 | 88<br>$ 24,675 | 0<br>$ 0 | 150<br>$ 4,379 |

Table B-29 (Cont'd)

RESPONSIVENESS: REQUIREMENT DATE TO RECEIPT DATE BY ACTUAL SOURCE--CANNON AIR FORCE BASE

| TIME INTERVAL | ACTUAL SOURCE SAE # RECORDS / $ VALUE | SAG # RECORDS / $ VALUE | SAT # RECORDS / $ VALUE | ICP # RECORDS / $ VALUE | GSF # RECORDS / $ VALUE | GSS # RECORDS / $ VALUE | FAB # RECORDS / $ VALUE | DPD # RECORDS / $ VALUE |
|---|---|---|---|---|---|---|---|---|
| 0-1 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 1<br>$ 125 |
| 2-7 | 1<br>$ 3 | 0<br>$ 0 | 0<br>$ 0 | 2<br>$ 411 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 |
| 8-11 | 3<br>$ 13 | 1<br>$ 22 | 6<br>$ 51 | 0<br>$ 0 | 0<br>$ 0 | 11<br>$ 344 | 0<br>$ 0 | 0<br>$ 0 |
| 12 | 1<br>$ 24 | 1<br>$ 2 | 1<br>$ 63 | 1<br>$ 146 | 0<br>$ 0 | 4<br>$ 8,569 | 0<br>$ 0 | 0<br>$ 0 |
| 13-15 | 2<br>$ 66 | 7<br>$ 146 | 6<br>$ 134 | 10<br>$ 534 | 0<br>$ 0 | 17<br>$ 154 | 0<br>$ 0 | 0<br>$ 0 |
| 16 | 0<br>$ 0 | 1<br>$ 9 | 4<br>$ 68 | 1<br>$ 27 | 0<br>$ 0 | 1<br>$ 8 | 0<br>$ 0 | 0<br>$ 0 |
| 17-28 | 5<br>$ 110 | 22<br>$ 1,187 | 25<br>$ 1,858 | 11<br>$ 264 | 0<br>$ 0 | 59<br>$ 1,853 | 0<br>$ 0 | 0<br>$ 0 |
| 29-66 | 1<br>$ 40 | 23<br>$ 1,004 | 16<br>$ 963 | 41<br>$ 7,386 | 6<br>$ 5 | 88<br>$ 1,780 | 0<br>$ 0 | 0<br>$ 0 |
| 67-71 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 11<br>$ 167 | 0<br>$ 0 | 5<br>$ 70 | 0<br>$ 0 | 0<br>$ 0 |
| 72-81 | 1<br>$ 6 | 0<br>$ 0 | 0<br>$ 0 | 8<br>$ 147 | 0<br>$ 0 | 9<br>$ 195 | 0<br>$ 0 | 0<br>$ 0 |
| OVER 81 | 0<br>$ 0 | 11<br>$ 693 | 13<br>$ 896 | 20<br>$ 1,965 | 0<br>$ 0 | 77<br>$ 1,336 | 0<br>$ 0 | 0<br>$ 0 |
| OVER 92 | 0<br>$ 0 | 11<br>$ 693 | 9<br>$ 632 | 16<br>$ 1,919 | 0<br>$ 0 | 62<br>$ 1,143 | 0<br>$ 0 | 0<br>$ 0 |
| OVER 127 | 0<br>$ 0 | 9<br>$ 668 | 5<br>$ 583 | 12<br>$ 1,863 | 0<br>$ 0 | 41<br>$ 685 | 0<br>$ 0 | 0<br>$ 0 |
| OVER 157 | 0<br>$ 0 | 7<br>$ 630 | 3<br>$ 277 | 5<br>$ 1,745 | 0<br>$ 0 | 41<br>$ 685 | 0<br>$ 0 | 0<br>$ 0 |
| OVER 183 | 0<br>$ 0 | 7<br>$ 630 | 3<br>$ 277 | 2<br>$ 1,728 | 0<br>$ 0 | 30<br>$ 526 | 0<br>$ 0 | 0<br>$ 0 |
| TOTAL | 14<br>$ 262 | 66<br>$ 3,063 | 71<br>$ 4,060 | 135<br>$ 11,040 | 6<br>$ 5 | 271<br>$ 14,309 | 0<br>$ 0 | 1<br>$ 125 |

Table B-29 (Cont'd)

RESPONSIVENESS: REQUIREMENT DATE TO RECEIPT DATE BY ACTUAL SOURCE--CANNON AIR FORCE BASE

| TIME INTERVAL | ACTUAL SOURCE DAK # RECORDS / $ VALUE | LPO FEX # RECORDS / $ VALUE | TCP FEX # RECORDS / $ VALUE | OTH FEX # RECORDS / $ VALUE | WWW # RECORDS / $ VALUE | TOTAL # RECORDS / $ VALUE |
|---|---|---|---|---|---|---|
| 0-1 | 0 | 4 | 46 | 8 | 0 | 1,927 |
| | $ 0 | $ 1,417 | $ 927 | $ 118 | $ 0 | $ 65,616 |
| 2-7 | 0 | 9 | 24 | 1 | 0 | 640 |
| | $ 0 | $ 414 | $ 18 | $ 12 | $ 0 | $ 30,973 |
| 8-11 | 0 | 0 | 1 | 0 | 0 | 223 |
| | $ 0 | $ 0 | $ 3 | $ 0 | $ 0 | $ 15,089 |
| 12 | 0 | 0 | 0 | 0 | 0 | 60 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 10,592 |
| 13-15 | 0 | 1 | 0 | 0 | 0 | 266 |
| | $ 0 | $ 10 | $ 0 | $ 0 | $ 0 | $ 39,448 |
| 16 | 0 | 0 | 0 | 0 | 0 | 62 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 7,744 |
| 17-28 | 0 | 0 | 0 | 0 | 0 | 729 |
| | $ 0 | $ 0 | $ 37 | $ 0 | $ 0 | $ 54,390 |
| 29-66 | 0 | 2 | 5 | 1 | 0 | 578 |
| | $ 0 | $ 275 | $ 63 | $ 12 | $ 0 | $ 78,244 |
| 67-71 | 0 | 0 | 0 | 0 | 0 | 29 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 3,275 |
| 72-81 | 0 | 3 | 0 | 0 | 0 | 61 |
| | $ 0 | $ 92 | $ 0 | $ 0 | $ 0 | $ 10,566 |
| OVER 81 | 0 | 0 | 2 | 1 | 0 | 225 |
| | $ 0 | $ 0 | $ 0 | $ 6 | $ 0 | $ 21,389 |
| OVER 93 | 0 | 0 | 2 | 1 | 0 | 191 |
| | $ 0 | $ 0 | $ 0 | $ 6 | $ 0 | $ 18,448 |
| OVER 123 | 0 | 0 | 2 | 1 | 0 | 121 |
| | $ 0 | $ 0 | $ 0 | $ 6 | $ 0 | $ 15,996 |
| OVER 153 | 0 | 0 | 2 | 0 | 0 | 87 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 15,160 |
| OVER 183 | 0 | 0 | 2 | 0 | 0 | 70 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 14,934 |
| TOTAL | 0 | 19 | 97 | 11 | 0 | 4,800 |
| | $ 0 | $ 2,208 | $ 1,948 | $ 148 | $ 0 | $ 329,246 |

Table B-30

RESPONSIVENESS: REQUIREMENT DATE TO RECEIPT DATE BY ACTUAL SOURCE--DOVER AIR FORCE BASE

| TIME INTERVAL | ACTUAL SOURCE COC # RECORDS / $ VALUE | GOC # RECORDS / $ VALUE | LPO STK # RECORDS / $ VALUE | ICP STK # RECORDS / $ VALUE | OTH STK # RECORDS / $ VALUE | LPO # RECORDS / $ VALUE | LPD # RECORDS / $ VALUE | SSC # RECORDS / $ VALUE |
|---|---|---|---|---|---|---|---|---|
| 0-1 | 0<br>$ 0 | 2<br>$ 0 | 341<br>$ 51,462 | 701<br>$ 11,323 | 243<br>$ 3,815 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 |
| 2-7 | 0<br>$ 0 | 0<br>$ 0 | 59<br>$ 3,726 | 103<br>$ 4,688 | 54<br>$ 2,327 | 26<br>$ 2,875 | 0<br>$ 0 | 0<br>$ 0 |
| 8-11 | 0<br>$ 0 | 0<br>$ 0 | 12<br>$ 345 | 10<br>$ 330 | 6<br>$ 57 | 17<br>$ 3,595 | 0<br>$ 0 | 1<br>$ 2 |
| 12 | 0<br>$ 0 | 0<br>$ 0 | 2<br>$ 31 | 2<br>$ 23 | 1<br>$ 2 | 9<br>$ 1,244 | 0<br>$ 0 | 0<br>$ 0 |
| 13-15 | 0<br>$ 0 | 0<br>$ 0 | 4<br>$ 39 | 11<br>$ 163 | 6<br>$ 156 | 8<br>$ 817 | 0<br>$ 0 | 13<br>$ 38 |
| 16 | 0<br>$ 0 | 0<br>$ 0 | 2<br>$ 41 | 2<br>$ 39 | 0<br>$ 0 | 5<br>$ 94 | 0<br>$ 0 | 1<br>$ 264 |
| 17-28 | 0<br>$ 0 | 0<br>$ 0 | 18<br>$ 473 | 11<br>$ 369 | 22<br>$ 167 | 52<br>$ 15,486 | 0<br>$ 0 | 47<br>$ 338 |
| 29-66 | 0<br>$ 0 | 0<br>$ 0 | 29<br>$ 582 | 15<br>$ 245 | 38<br>$ 498 | 279<br>$ 19,765 | 0<br>$ 0 | 27<br>$ 568 |
| 67-71 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 5<br>$ 27 | 65<br>$ 2,521 | 0<br>$ 0 | 0<br>$ 0 |
| 72-81 | 0<br>$ 0 | 0<br>$ 0 | 3<br>$ 365 | 0<br>$ 0 | 4<br>$ 31 | 49<br>$ 3,810 | 0<br>$ 0 | 0<br>$ 0 |
| OVER 81 | 0<br>$ 0 | 0<br>$ 0 | 8<br>$ 2,687 | 8<br>$ 387 | 20<br>$ 219 | 146<br>$ 10,268 | 0<br>$ 0 | 10<br>$ 1,145 |
| OVER 90 | 0<br>$ 0 | 0<br>$ 0 | 7<br>$ 2,513 | 8<br>$ 387 | 10<br>$ 215 | 113<br>$ 12,952 | 0<br>$ 0 | 3<br>$ 151 |
| OVER 120 | 0<br>$ 0 | 0<br>$ 0 | 6<br>$ 2,511 | 7<br>$ 375 | 9<br>$ 73 | 57<br>$ 5,731 | 0<br>$ 0 | 1<br>$ 7 |
| OVER 150 | 0<br>$ 0 | 0<br>$ 0 | 5<br>$ 7 | 5<br>$ 296 | 7<br>$ 63 | 38<br>$ 3,382 | 0<br>$ 0 | 1<br>$ 7 |
| OVER 180 | 0<br>$ 0 | 0<br>$ 0 | 5<br>$ 7 | 5<br>$ 296 | 4<br>$ 29 | 25<br>$ 2,682 | 0<br>$ 0 | 1<br>$ 7 |
| TOTAL | 0<br>$ 0 | 0<br>$ 0 | 479<br>$ 59,671 | 863<br>$ 17,567 | 390<br>$ 7,290 | 656<br>$ 68,475 | 0<br>$ 0 | 99<br>$ 2,355 |

Table B-30 (Cont'd)

RESPONSIVENESS: REQUIREMENT DATE TO RECEIPT DATE BY ACTUAL SOURCE--DOVER AIR FORCE BASE

| TIME INTERVAL | ACTUAL SOURCE SAE # RECORDS $ VALUE | SAG # RECORDS $ VALUE | SAI # RECORDS $ VALUE | ICP # RECORDS $ VALUE | GSF # RECORDS $ VALUE | GSS # RECORDS $ VALUE | FAB # RECORDS $ VALUE | DPD # RECORDS $ VALUE |
|---|---|---|---|---|---|---|---|---|
| 0-1 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 2<br>2,520 |
| 2-7 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>0 |
| 8-11 | 1<br>$ 50 | 2<br>$ 65 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 2<br>$ 39 | 0<br>$ 0 | 1<br>1,181 |
| 12 | 0<br>$ 0 | 0<br>$ 0 | 2<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>0 |
| 13-15 | 2<br>$ 120 | 6<br>$ 155 | 0<br>$ 0 | 1<br>$ 24 | 0<br>$ 0 | 2<br>$ 0 | 0<br>$ 0 | 0<br>0 |
| 16 | 0<br>$ 0 | 6<br>$ 565 | 1<br>$ 10 | 1<br>$ 134 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>0 |
| 17-28 | 11<br>$ 395 | 32<br>$ 2,245 | 15<br>$ 710 | 6<br>$ 125 | 0<br>$ 0 | 23<br>$ 217 | 0<br>$ 0 | 1<br>688 |
| 29-66 | 0<br>$ 0 | 21<br>$ 946 | 15<br>$ 495 | 14<br>$ 9,831 | 1<br>$ 51 | 98<br>$ 1,569 | 0<br>$ 0 | 0<br>0 |
| 67-71 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 9<br>$ 138 | 0<br>$ 0 | 0<br>0 |
| 72-81 | 0<br>$ 0 | 2<br>$ 217 | 0<br>$ 0 | 1<br>$ 6 | 0<br>$ 0 | 9<br>$ 1,298 | 0<br>$ 0 | 0<br>0 |
| OVER 81 | 0<br>$ 0 | 11<br>$ 2,841 | 9<br>$ 618 | 5<br>$ 1,517 | 0<br>$ 0 | 44<br>$ 7,894 | 0<br>$ 0 | 0<br>0 |
| OVER 90 | 0<br>$ 0 | 11<br>$ 2,841 | 9<br>$ 618 | 4<br>$ 1,511 | 0<br>$ 0 | 38<br>$ 7,783 | 0<br>$ 0 | 0<br>0 |
| OVER 120 | 0<br>$ 0 | 8<br>$ 1,955 | 7<br>$ 192 | 3<br>$ 1,487 | 0<br>$ 0 | 26<br>$ 6,668 | 0<br>$ 0 | 0<br>0 |
| OVER 150 | 0<br>$ 0 | 1<br>$ 1,235 | 5<br>$ 140 | 3<br>$ 1,487 | 0<br>$ 0 | 23<br>$ 6,612 | 0<br>$ 0 | 0<br>0 |
| OVER 180 | 0<br>$ 0 | 1<br>$ 1,235 | 3<br>$ 61 | 3<br>$ 1,487 | 0<br>$ 0 | 21<br>$ 6,561 | 0<br>$ 0 | 0<br>0 |
| TOTAL | 14<br>$ 565 | 58<br>$ 6,234 | 42<br>$ 1,849 | 28<br>$ 11,637 | 1<br>$ 51 | 187<br>$ 11,155 | 0<br>$ 0 | 4<br>4,381 |

Table B-30 (Cont'd)

RESPONSIVENESS: REQUIREMENT DATE TO RECEIPT DATE BY ACTUAL SOURCE--DOVER AIR FORCE BASE

| TIME INTERVAL | ACTUAL SOURCE DAK # RECORDS / $ VALUE | LPO FEX # RECORDS / $ VALUE | ICP FEX # RECORDS / $ VALUE | OTH FEX # RECORDS / $ VALUE | WWW # RECORDS / $ VALUE | TOTAL # RECORDS / $ VALUE |
|---|---|---|---|---|---|---|
| 7-1 | 0 | 10 | 9 | 10 | 0 | 1,316 |
| | $ 0 | $ 1,007 | $ 220 | $ 175 | $ 0 | $ 70,522 |
| 2-7 | 0 | 2 | 11 | 7 | 0 | 262 |
| | $ 0 | $ 27 | $ 450 | $ 332 | $ 0 | $ 14,425 |
| 8-11 | 0 | 1 | 2 | 1 | 0 | 56 |
| | $ 0 | $ 9 | $ 25 | $ 19 | $ 0 | $ 5,717 |
| 12 | 0 | 0 | 0 | 0 | 0 | 16 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 1,308 |
| 13-15 | 0 | 0 | 0 | 0 | 0 | 53 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 1,520 |
| 16 | 0 | 0 | 0 | 0 | 0 | 18 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 1,147 |
| 17-28 | 0 | 0 | 0 | 1 | 0 | 239 |
| | $ 0 | $ 0 | $ 0 | $ 3 | $ 0 | $ 21,136 |
| 29-66 | 0 | 0 | 1 | 2 | 0 | 540 |
| | $ 0 | $ 0 | $ 20 | $ 87 | $ 0 | $ 34,657 |
| 67-71 | 0 | 1 | 0 | 0 | 0 | 80 |
| | $ 0 | $ 247 | $ 0 | $ 0 | $ 0 | $ 2,925 |
| 72-81 | 0 | 0 | 0 | 0 | 0 | 68 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 5,727 |
| OVER 81 | 0 | 2 | 1 | 14 | 0 | 278 |
| | $ 0 | $ 12 | $ 50 | $ 230 | $ 0 | $ 34,988 |
| OVER 90 | 0 | 2 | 1 | 10 | 0 | 224 |
| | $ 0 | $ 12 | $ 50 | $ 154 | $ 0 | $ 28,387 |
| OVER 120 | 0 | 2 | 1 | 6 | 0 | 133 |
| | $ 0 | $ 12 | $ 50 | $ 78 | $ 0 | $ 19,139 |
| OVER 150 | 0 | 1 | 1 | 4 | 0 | 94 |
| | $ 0 | $ 1 | $ 50 | $ 57 | $ 0 | $ 13,337 |
| OVER 180 | 0 | 1 | 1 | 1 | 0 | 71 |
| | $ 0 | $ 1 | $ 50 | $ 0 | $ 0 | $ 12,416 |
| TOTAL | 0 | 16 | 24 | 35 | 0 | 2,926 |
| | $ 0 | $ 1,302 | $ 765 | $ 846 | $ 0 | $ 194,072 |

Table B-31

RESPONSIVENESS: REQUIREMENT DATE TO RECEIPT DATE BY ACTUAL SOURCE--HURLBURT FIELD

| TIME INTERVAL | ACTUAL SOURCE COC # RECORDS / $ VALUE | GOC # RECORDS / $ VALUE | LPD STK # RECORDS / $ VALUE | ICP STK # RECORDS / $ VALUE | OTH STK # RECORDS / $ VALUE | LPO # RECORDS / $ VALUE | LPD # RECORDS / $ VALUE | SAC # RECORDS / $ VALUE |
|---|---|---|---|---|---|---|---|---|
| 0-1 | 441<br>$ 19,492 | 0<br>$ 0 | 289<br>$ 61,647 | 1,239<br>$ 76,897 | 321<br>$ 7,788 | 2<br>$ 78 | 0<br>$ 0 | 0<br>$ 0 |
| 2-7 | 111<br>$ 3,547 | 0<br>$ 0 | 23<br>$ 8,882 | 53<br>$ 901 | 49<br>$ 1,287 | 58<br>$ 3,532 | 0<br>$ 0 | 1<br>$ 2 |
| 8-11 | 18<br>$ 5,136 | 0<br>$ 0 | 5<br>$ 287 | 42<br>$ 1,231 | 12<br>$ 2,828 | 21<br>$ 2,629 | 0<br>$ 0 | 2<br>$ 8 |
| 12 | 3<br>$ 386 | 0<br>$ 0 | 2<br>$ 378 | 1<br>$ 0 | 0<br>$ 0 | 2<br>$ 54 | 0<br>$ 0 | 4<br>$ 58 |
| 13-15 | 18<br>$ 751 | 0<br>$ 0 | 1<br>$ 98 | 6<br>$ 114 | 17<br>$ 89 | 18<br>$ 696 | 0<br>$ 0 | 18<br>$ 175 |
| 16 | 8<br>$ 2,858 | 0<br>$ 0 | 0<br>$ 0 | 1<br>$ 21 | 1<br>$ 0 | 4<br>$ 286 | 0<br>$ 0 | 3<br>$ 15 |
| 17-25 | 25<br>$ 13,324 | 0<br>$ 0 | 5<br>$ 64 | 13<br>$ 744 | 30<br>$ 432 | 33<br>$ 3,411 | 0<br>$ 0 | 37<br>$ 366 |
| 26-66 | 32<br>$ 2,188 | 0<br>$ 0 | 8<br>$ 168 | 14<br>$ 775 | 28<br>$ 198 | 48<br>$ 8,837 | 0<br>$ 0 | 26<br>$ 1,531 |
| 67-71 | 2<br>$ 43 | 0<br>$ 0 | 0<br>$ 0 | 1<br>$ 16 | 5<br>$ 16 | 17<br>$ 652 | 0<br>$ 0 | 0<br>$ 0 |
| 72-81 | 5<br>$ 157 | 0<br>$ 0 | 1<br>$ 5 | 4<br>$ 58 | 5<br>$ 63 | 8<br>$ 229 | 0<br>$ 0 | 2<br>$ 237 |
| OVER 81 | 30<br>$ 3,523 | 0<br>$ 0 | 5<br>$ 112 | 14<br>$ 2,866 | 28<br>$ 187 | 63<br>$ 8,851 | 0<br>$ 0 | 8<br>$ 629 |
| OVER 90 | 30<br>$ 3,523 | 0<br>$ 0 | 3<br>$ 25 | 14<br>$ 2,866 | 23<br>$ 158 | 56<br>$ 7,421 | 0<br>$ 0 | 8<br>$ 629 |
| OVER 120 | 19<br>$ 1,823 | 0<br>$ 0 | 0<br>$ 0 | 6<br>$ 2,285 | 13<br>$ 91 | 14<br>$ 848 | 0<br>$ 0 | 6<br>$ 542 |
| OVER 150 | 10<br>$ 1,749 | 0<br>$ 0 | 0<br>$ 0 | 3<br>$ 2,068 | 3<br>$ 24 | 8<br>$ 702 | 0<br>$ 0 | 5<br>$ 534 |
| OVER 180 | 5<br>$ 301 | 0<br>$ 0 | 0<br>$ 0 | 1<br>$ 1,829 | 2<br>$ 21 | 5<br>$ 634 | 0<br>$ 0 | 4<br>$ 529 |
| TOTAL | 694<br>$ 58,217 | 0<br>$ 0 | 259<br>$ 71,617 | 1,388<br>$ 92,815 | 496<br>$ 12,888 | 266<br>$ 28,367 | 0<br>$ 0 | 101<br>$ 3,821 |

Table B-31 (Cont'd)

RESPONSIVENESS: REQUIREMENT DATE TO RECEIPT DATE BY ACTUAL SOURCE--HURLBURT FIELD

| TIME INTERVAL | ACTUAL SOURCE SQE # RECORDS $ VALUE | SQG # RECORDS $ VALUE | SQI # RECORDS $ VALUE | ICP # RECORDS $ VALUE | GSF # RECORDS $ VALUE | GSS # RECORDS $ VALUE | FAB # RECORDS $ VALUE | DPD # RECORDS $ VALUE |
|---|---|---|---|---|---|---|---|---|
| 0-1 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 |
| 2-7 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 1<br>$ 19 | 0<br>$ 0 | 0<br>$ 0 |
| 8-11 | 0<br>$ 0 | 3<br>$ 56 | 3<br>$ 60 | 4<br>$ 324 | 0<br>$ 0 | 5<br>$ 224 | 0<br>$ 0 | 0<br>$ 0 |
| 12 | 0<br>$ 0 | 2<br>$ 160 | 3<br>$ 61 | 1<br>$ 24 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 |
| 13-15 | 11<br>$ 229 | 13<br>$ 278 | 12<br>$ 30 | 6<br>$ 507 | 0<br>$ 0 | 7<br>$ 77 | 0<br>$ 0 | 0<br>$ 0 |
| 16 | 1<br>$ 3 | 1<br>$ 2 | 2<br>$ 80 | 1<br>$ 118 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 |
| 17-29 | 3<br>$ 26 | 12<br>$ 407 | 10<br>$ 294 | 5<br>$ 580 | 1<br>$ 14 | 50<br>$ 916 | 0<br>$ 0 | 0<br>$ 0 |
| 30-66 | 8<br>$ 117 | 16<br>$ 2,360 | 17<br>$ 1,981 | 10<br>$ 512 | 5<br>$ 955 | 55<br>$ 1,654 | 0<br>$ 0 | 0<br>$ 0 |
| 67-71 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 1<br>$ 15 | 0<br>$ 0 | 1<br>$ 8 | 0<br>$ 0 | 0<br>$ 0 |
| 72-81 | 1<br>$ 7 | 1<br>$ 143 | 1<br>$ 75 | 1<br>$ 24 | 3<br>$ 718 | 11<br>$ 309 | 0<br>$ 0 | 0<br>$ 0 |
| OVER 81 | 1<br>$ 3 | 5<br>$ 231 | 11<br>$ 297 | 8<br>$ 527 | 0<br>$ 0 | 45<br>$ 680 | 0<br>$ 0 | 0<br>$ 0 |
| OVER 90 | 1<br>$ 3 | 2<br>$ 217 | 11<br>$ 297 | 4<br>$ 407 | 0<br>$ 0 | 43<br>$ 674 | 0<br>$ 0 | 0<br>$ 0 |
| OVER 120 | 1<br>$ 3 | 1<br>$ 13 | 9<br>$ 260 | 2<br>$ 143 | 0<br>$ 0 | 38<br>$ 643 | 0<br>$ 0 | 0<br>$ 0 |
| OVER 150 | 1<br>$ 3 | 1<br>$ 13 | 6<br>$ 250 | 1<br>$ 17 | 0<br>$ 0 | 33<br>$ 580 | 0<br>$ 0 | 0<br>$ 0 |
| OVER 180 | 0<br>$ 0 | 1<br>$ 13 | 5<br>$ 246 | 1<br>$ 17 | 0<br>$ 0 | 21<br>$ 339 | 0<br>$ 0 | 0<br>$ 0 |
| TOTAL | 25<br>$ 385 | 50<br>$ 3,637 | 59<br>$ 2,878 | 37<br>$ 2,631 | 9<br>$ 1,687 | 175<br>$ 3,887 | 0<br>$ 0 | 0<br>$ 0 |

Table B-31 (Cont'd)

RESPONSIVENESS: REQUIREMENT DATE TO RECEIPT DATE BY ACTUAL SOURCE--HURLBURT FIELD

| TIME INTERVAL | ACTUAL SOURCE JAK # RECORDS / $ VALUE | LPO FEX # RECORDS / $ VALUE | ICP FEX # RECORDS / $ VALUE | OTH FEX # RECORDS / $ VALUE | WWW # RECORDS / $ VALUE | TOTAL # RECORDS / $ VALUE |
|---|---|---|---|---|---|---|
| 0-1 | 0 | 2 | 31 | 6 | 0 | 2,253 |
| | $ 0 | $ 31 | $ 362 | $ 183 | $ 0 | $ 165,670 |
| 2-7 | 0 | 0 | 5 | 0 | 0 | 293 |
| | $ 0 | $ 0 | $ 81 | $ 0 | $ 0 | $ 18,171 |
| 8-11 | 0 | 0 | 1 | 2 | 0 | 118 |
| | $ 0 | $ 0 | $ 24 | $ 12 | $ 0 | $ 12,819 |
| 12 | 0 | 0 | 0 | 0 | 0 | 18 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 1,113 |
| 13-15 | 0 | 0 | 0 | 0 | 0 | 124 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 3,036 |
| 16 | 0 | 0 | 0 | 0 | 0 | 23 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 2,495 |
| 17-25 | 0 | 0 | 0 | 1 | 0 | 225 |
| | $ 0 | $ 0 | $ 0 | $ 43 | $ 0 | $ 20,321 |
| 26-66 | 0 | 0 | 1 | 5 | 0 | 273 |
| | $ 0 | $ 0 | $ 20 | $ 55 | $ 0 | $ 21,263 |
| 67-71 | 0 | 0 | 0 | 0 | 0 | 27 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 750 |
| 72-81 | 0 | 0 | 0 | 0 | 0 | 43 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 2,817 |
| OVER 81 | 0 | 0 | 0 | 3 | 0 | 221 |
| | $ 0 | $ 0 | $ 0 | $ 44 | $ 0 | $ 17,150 |
| OVER 90 | 0 | 0 | 0 | 3 | 0 | 198 |
| | $ 0 | $ 0 | $ 0 | $ 44 | $ 0 | $ 16,264 |
| OVER 120 | 0 | 0 | 0 | 0 | 0 | 109 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 6,651 |
| OVER 150 | 0 | 0 | 0 | 0 | 0 | 71 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 5,932 |
| OVER 180 | 0 | 0 | 0 | 0 | 0 | 45 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 3,929 |
| TOTAL | 0 | 2 | 38 | 19 | 0 | 3,618 |
| | $ 0 | $ 31 | $ 487 | $ 337 | $ 0 | $ 264,805 |

Table B-32

RESPONSIVENESS: REQUIREMENT DATE TO RECEIPT DATE BY ACTUAL SOURCE --OFFUTT AIR FORCE BASE

| TIME INTERVAL | ACTUAL SOURCE: COC # RECORDS / $ VALUE | GOC # RECORDS / $ VALUE | LPO STK # RECORDS / $ VALUE | ICP STK # RECORDS / $ VALUE | OTH STK # RECORDS / $ VALUE | LPO # RECORDS / $ VALUE | LPD # RECORDS / $ VALUE | SPC # RECORDS / $ VALUE |
|---|---|---|---|---|---|---|---|---|
| 0-1 | 0 | 4,059 | 45 | 133 | 73 | 0 | 0 | 0 |
| | $ 0 | $ 51,478 | $ 13,528 | $ 6,142 | $ 3,398 | $ 0 | $ 0 | $ 0 |
| 2-7 | 0 | 37 | 0 | 27 | 48 | 17 | 0 | 0 |
| | $ 0 | $ 844 | $ 4,858 | $ 696 | $ 402 | $ 423 | $ 0 | $ 0 |
| 8-11 | 0 | 15 | 2 | 18 | 9 | 11 | 0 | 0 |
| | $ 0 | $ 1,585 | $ 5 | $ 206 | $ 60 | $ 218 | $ 0 | $ 0 |
| 12 | 0 | 6 | 0 | 4 | 2 | 0 | 0 | 0 |
| | $ 0 | $ 614 | $ 0 | $ 22 | $ 7 | $ 0 | $ 0 | $ 0 |
| 13-15 | 0 | 7 | 2 | 11 | 15 | 1 | 0 | 0 |
| | $ 0 | $ 473 | $ 23 | $ 91 | $ 103 | $ 45 | $ 0 | $ 0 |
| 16 | 0 | 1 | 0 | 2 | 1 | 0 | 0 | 1 |
| | $ 0 | $ 25 | $ 0 | $ 18 | $ 0 | $ 0 | $ 0 | $ 4 |
| 17-21 | 0 | 7 | 4 | 30 | 22 | 14 | 0 | 6 |
| | $ 0 | $ 422 | $ 18 | $ 608 | $ 114 | $ 639 | $ 0 | $ 328 |
| 22-66 | 0 | 49 | 1 | 13 | 31 | 12 | 0 | 5 |
| | $ 0 | $ 3,644 | $ 34 | $ 251 | $ 1,114 | $ 1,611 | $ 0 | $ 2,349 |
| 67-71 | 0 | 1 | 0 | 1 | 4 | 1 | 0 | 1 |
| | $ 0 | $ 89 | $ 0 | $ 69 | $ 22 | $ 21 | $ 0 | $ 144 |
| 72-81 | 0 | 2 | 0 | 1 | 6 | 2 | 0 | 0 |
| | $ 0 | $ 56 | $ 0 | $ 67 | $ 44 | $ 1,044 | $ 0 | $ 0 |
| OVER 91 | 0 | 12 | 3 | 4 | 16 | 3 | 0 | 9 |
| | $ 0 | $ 1,538 | $ 4 | $ 178 | $ 314 | $ 552 | $ 0 | $ 751 |
| OVER 98 | 0 | 12 | 2 | 3 | 13 | 3 | 0 | 9 |
| | $ 0 | $ 1,538 | $ 1 | $ 176 | $ 300 | $ 552 | $ 0 | $ 751 |
| OVER 120 | 0 | 5 | 0 | 0 | 6 | 3 | 0 | 9 |
| | $ 0 | $ 1,056 | $ 0 | $ 0 | $ 218 | $ 552 | $ 0 | $ 751 |
| OVER 150 | 0 | 4 | 0 | 0 | 3 | 3 | 0 | 7 |
| | $ 0 | $ 756 | $ 0 | $ 0 | $ 87 | $ 552 | $ 0 | $ 695 |
| OVER 180 | 0 | 1 | 0 | 0 | 2 | 3 | 0 | 2 |
| | $ 0 | $ 64 | $ 0 | $ 0 | $ 43 | $ 552 | $ 0 | $ 550 |
| TOTAL | 0 | 4,196 | 66 | 244 | 227 | 61 | 0 | 22 |
| | $ 0 | $ 69,768 | $ 18,470 | $ 8,348 | $ 5,578 | $ 4,553 | $ 0 | $ 3,576 |

*Table B-32 (Cont'd)*

RESPONSIVENESS: REQUIREMENT DATE TO RECEIPT DATE BY ACTUAL SOURCE--OFFUTT AIR FORCE BASE

| TIME INTERVAL | ACTUAL SOURCE SAE # RECORDS / $ VALUE | SAG # RECORDS / $ VALUE | SAI # RECORDS / $ VALUE | ICP # RECORDS / $ VALUE | GSF # RECORDS / $ VALUE | GSS # RECORDS / $ VALUE | FAB # RECORDS / $ VALUE | DPD # RECORDS / $ VALUE |
|---|---|---|---|---|---|---|---|---|
| 0-1 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>0 |
| 2-7 | 2<br>$ 67 | 0<br>$ 0 | 0<br>$ 0 | 2<br>$ 47 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>0 |
| 8-11 | 5<br>$ 138 | 5<br>$ 52 | 1<br>$ 1 | 3<br>$ 99 | 1<br>$ 68 | 4<br>$ 90 | 0<br>$ 0 | 0<br>0 |
| 12 | 3<br>$ 51 | 1<br>$ 15 | 0<br>$ 0 | 1<br>$ 311 | 0<br>$ 0 | 3<br>$ 58 | 0<br>$ 0 | 0<br>0 |
| 13-15 | 5<br>$ 81 | 15<br>$ 207 | 6<br>$ 113 | 5<br>$ 201 | 0<br>$ 0 | 1<br>$ 12 | 0<br>$ 0 | 0<br>0 |
| 16 | 4<br>$ 82 | 4<br>$ 170 | 3<br>$ 143 | 4<br>$ 182 | 0<br>$ 0 | 1<br>$ 3 | 0<br>$ 0 | 0<br>0 |
| 17-20 | 1<br>$ 23 | 23<br>$ 348 | 8<br>$ 881 | 16<br>$ 561 | 0<br>$ 0 | 21<br>$ 124 | 0<br>$ 0 | 0<br>0 |
| 21-66 | 0<br>$ 0 | 10<br>$ 1,075 | 5<br>$ 915 | 58<br>$ 8,635 | 0<br>$ 0 | 44<br>$ 3,105 | 0<br>$ 0 | 0<br>0 |
| 67-71 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 5<br>$ 938 | 0<br>$ 0 | 8<br>$ 122 | 0<br>$ 0 | 0<br>0 |
| 72-81 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 4<br>$ 642 | 0<br>$ 0 | 16<br>$ 102 | 0<br>$ 0 | 0<br>0 |
| OVER 81 | 1<br>$ 822 | 1<br>$ 73 | 0<br>$ 0 | 15<br>$ 9,641 | 0<br>$ 0 | 57<br>$ 16,641 | 0<br>$ 0 | 0<br>0 |
| OVER 90 | 1<br>$ 822 | 0<br>$ 0 | 0<br>$ 0 | 12<br>$ 9,586 | 0<br>$ 0 | 49<br>$ 11,851 | 0<br>$ 0 | 0<br>0 |
| OVER 120 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 5<br>$ 9,366 | 0<br>$ 0 | 35<br>$ 1,860 | 0<br>$ 0 | 0<br>0 |
| OVER 150 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 2<br>$ 9,343 | 0<br>$ 0 | 28<br>$ 1,733 | 0<br>$ 0 | 0<br>0 |
| OVER 180 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 2<br>$ 9,343 | 0<br>$ 0 | 19<br>$ 1,525 | 0<br>$ 0 | 0<br>0 |
| TOTAL | 21<br>$ 1,264 | 59<br>$ 1,940 | 23<br>$ 2,053 | 113<br>$ 21,257 | 1<br>$ 68 | 155<br>$ 20,257 | 0<br>$ 0 | 0<br>0 |

Table B-32 (Cont'd)

RESPONSIVENESS: REQUIREMENT DATE TO RECEIPT DATE BY ACTUAL SOURCE--OFFUTT AIR FORCE BASE

| TIME INTERVAL | ACTUAL SOURCE DAK # RECORDS / $ VALUE | LPO FEX # RECORDS / $ VALUE | ICP FEX # RECORDS / $ VALUE | OTH FEX # RECORDS / $ VALUE | WWW # RECORDS / $ VALUE | TOTAL # RECORDS / $ VALUE |
|---|---|---|---|---|---|---|
| 0-1 | 0 | 0 | 10 | 6 | 0 | 4,326 |
| | $ 0 | $ 0 | $ 72 | $ 82 | $ 0 | $ 74,700 |
| 2-7 | 0 | 0 | 0 | 0 | 0 | 142 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 7,337 |
| 8-11 | 0 | 0 | 0 | 0 | 0 | 74 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 2,522 |
| 12 | 0 | 0 | 0 | 0 | 0 | 20 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 1,078 |
| 13-15 | 0 | 0 | 0 | 0 | 0 | 68 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 1,349 |
| 16 | 0 | 0 | 0 | 0 | 0 | 21 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 627 |
| 17-28 | 0 | 0 | 0 | 0 | 0 | 152 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 4,066 |
| 29-66 | 0 | 0 | 0 | 0 | 0 | 228 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 22,733 |
| 67-71 | 0 | 0 | 0 | 0 | 0 | 21 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 1,405 |
| 72-81 | 0 | 0 | 0 | 0 | 0 | 31 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 1,955 |
| OVER 81 | 0 | 0 | 0 | 1 | 0 | 122 |
| | $ 0 | $ 0 | $ 0 | $ 43 | $ 0 | $ 30,557 |
| OVER 90 | 0 | 0 | 0 | 1 | 0 | 105 |
| | $ 0 | $ 0 | $ 0 | $ 43 | $ 0 | $ 25,620 |
| OVER 120 | 0 | 0 | 0 | 1 | 0 | 64 |
| | $ 0 | $ 0 | $ 0 | $ 43 | $ 0 | $ 13,846 |
| OVER 150 | 0 | 0 | 0 | 1 | 0 | 48 |
| | $ 0 | $ 0 | $ 0 | $ 43 | $ 0 | $ 12,909 |
| OVER 180 | 0 | 0 | 0 | 1 | 0 | 30 |
| | $ 0 | $ 0 | $ 0 | $ 43 | $ 0 | $ 11,820 |
| TOTAL | 0 | 0 | 13 | 7 | 0 | 5,205 |
| | $ 0 | $ 0 | $ 72 | $ 125 | $ 0 | $ 148,329 |

Table B-33

RESPONSIVENESS: REQUIREMENT DATE TO RECEIPT DATE BY ACTUAL SOURCE--CAMP LEJEUNE

| TIME INTERVAL | ACTUAL SOURCE COC # RECORDS / $ VALUE | GOC # RECORDS / $ VALUE | LPO STK # RECORDS / $ VALUE | ICP STK # RECORDS / $ VALUE | OTH STK # RECORDS / $ VALUE | LPO # RECORDS / $ VALUE | LPD # RECORDS / $ VALUE | SPC # RECORDS / $ VALUE |
|---|---|---|---|---|---|---|---|---|
| 1-1 | 0<br>$ 0 | 0<br>$ 0 | 3,904<br>$ 188,504 | 5,406<br>$ 147,916 | 848<br>$ 14,711 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 |
| 2-7 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 |
| 8-11 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 1<br>$ 1,435 | 0<br>$ 0 | 0<br>$ 0 |
| 12 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 |
| 13-15 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 7<br>$ 1,280 | 0<br>$ 0 | 0<br>$ 0 |
| 16 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 2<br>$ 689 | 0<br>$ 0 | 0<br>$ 0 |
| 17-28 | 0<br>$ 0 | 0<br>$ 0 | 3<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 124<br>$ 27,828 | 0<br>$ 0 | 5<br>83 |
| 29-66 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 641<br>$ 199,679 | 0<br>$ 0 | 40<br>2,193 |
| 67-71 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 37<br>$ 30,259 | 0<br>$ 0 | 3<br>73 |
| 72-81 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 48<br>$ 9,208 | 0<br>$ 0 | 4<br>28 |
| OVER 81 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 183<br>$ 83,206 | 0<br>$ 0 | 6<br>252 |
| OVER 90 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 117<br>$ 74,315 | 0<br>$ 0 | 5<br>239 |
| OVER 120 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 54<br>$ 45,426 | 0<br>$ 0 | 2<br>65 |
| OVER 150 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 29<br>$ 20,429 | 0<br>$ 0 | 1<br>56 |
| OVER 180 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 20<br>$ 19,537 | 0<br>$ 0 | 1<br>56 |
| TOTAL | 0<br>$ 0 | 0<br>$ 0 | 3,904<br>$ 188,504 | 5,406<br>$ 147,916 | 848<br>$ 14,711 | 1,043<br>$ 353,584 | 0<br>$ 0 | 66<br>2,629 |

Table B-33 (Cont'd)

RESPONSIVENESS: REQUIREMENT DATE TO RECEIPT DATE BY ACTUAL SOURCE--CAMP LEJEUNE

| TIME INTERVAL | ACTUAL SOURCE SQF # RECORDS / $ VALUE | SQG # RECORDS / $ VALUE | SQI # RECORDS / $ VALUE | ICP # RECORDS / $ VALUE | GSF # RECORDS / $ VALUE | GSS # RECORDS / $ VALUE | FAB # RECORDS / $ VALUE | DPD # RECORDS / $ VALUE |
|---|---|---|---|---|---|---|---|---|
| 0-1 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 |
| 2-7 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 |
| 8-11 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 |
| 12 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 |
| 13-15 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 |
| 16 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 |
| 17-28 | 7<br>$ 755 | 11<br>$ 426 | 4<br>$ 480 | 5<br>$ 135 | 0<br>$ 0 | 4<br>$ 1,215 | 0<br>$ 0 | 0<br>$ 0 |
| 29-66 | 23<br>$ 1,910 | 50<br>$ 1,083 | 59<br>$ 2,688 | 20<br>$ 758 | 0<br>$ 0 | 21<br>$ 4,453 | 0<br>$ 0 | 0<br>$ 0 |
| 67-71 | 0<br>$ 0 | 2<br>$ 30 | 3<br>$ 12 | 0<br>$ 0 | 0<br>$ 0 | 2<br>$ 70 | 0<br>$ 0 | 0<br>$ 0 |
| 72-91 | 0<br>$ 0 | 1<br>$ 10 | 6<br>$ 568 | 3<br>$ 67 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 | 0<br>$ 0 |
| OVER 91 | 1<br>$ 129 | 3<br>$ 341 | 15<br>$ 428 | 3<br>$ 68 | 0<br>$ 0 | 3<br>$ 7,662 | 0<br>$ 0 | 0<br>$ 0 |
| OVER 99 | 0<br>$ 0 | 2<br>$ 311 | 15<br>$ 428 | 2<br>$ 52 | 0<br>$ 0 | 2<br>$ 7,640 | 0<br>$ 0 | 0<br>$ 0 |
| OVER 127 | 0<br>$ 0 | 1<br>$ 212 | 9<br>$ 362 | 0<br>$ 0 | 0<br>$ 0 | 2<br>$ 7,640 | 0<br>$ 0 | 0<br>$ 0 |
| OVER 150 | 0<br>$ 0 | 1<br>$ 212 | 9<br>$ 362 | 0<br>$ 0 | 0<br>$ 0 | 2<br>$ 7,640 | 0<br>$ 0 | 0<br>$ 0 |
| OVER 181 | 0<br>$ 0 | 1<br>$ 212 | 5<br>$ 202 | 0<br>$ 0 | 0<br>$ 0 | 1<br>$ 77 | 0<br>$ 0 | 0<br>$ 0 |
| TOTAL | 31<br>$ 2,794 | 67<br>$ 1,898 | 87<br>$ 4,176 | 31<br>$ 998 | 0<br>$ 0 | 30<br>$ 13,400 | 0<br>$ 0 | 0<br>$ 0 |

Table B-33 (Cont'd)

RESPONSIVENESS: REQUIREMENT DATE TO RECEIPT DATE BY ACTUAL SOURCE--CAMP LEJEUNE

| TIME INTERVAL | ACTUAL SOURCE OAK # RECORDS / $ VALUE | LPD FEX # RECORDS / $ VALUE | ICP FEX # RECORDS / $ VALUE | OTH FEX # RECORDS / $ VALUE | WWW # RECORDS / $ VALUE | TOTAL # RECORDS / $ VALUE |
|---|---|---|---|---|---|---|
| 0-1 | 0 | 0 | 2 | 0 | 0 | 13,158 |
| | $ 0 | $ 0 | $ 2 | $ 0 | $ 0 | $ 351,131 |
| 2-7 | 0 | 0 | 0 | 0 | 0 | 0 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 |
| 8-11 | 0 | 0 | 0 | 0 | 0 | 1 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 1,435 |
| 12 | 0 | 0 | 0 | 0 | 0 | 0 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 |
| 13-15 | 0 | 0 | 0 | 0 | 0 | 7 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 1,288 |
| 16 | 0 | 0 | 0 | 0 | 0 | 2 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 689 |
| 17-28 | 0 | 0 | 0 | 0 | 0 | 168 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 30,892 |
| 29-66 | 0 | 0 | 0 | 0 | 0 | 862 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 212,764 |
| 67-71 | 0 | 0 | 0 | 0 | 0 | 47 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 30,444 |
| 72-81 | 0 | 0 | 0 | 0 | 0 | 62 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 9,889 |
| OVER 81 | 0 | 0 | 0 | 0 | 0 | 214 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 92,986 |
| OVER 90 | 0 | 0 | 0 | 0 | 0 | 143 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 82,985 |
| OVER 120 | 0 | 0 | 0 | 0 | 0 | 68 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 53,705 |
| OVER 150 | 0 | 0 | 0 | 0 | 0 | 42 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 28,699 |
| OVER 180 | 0 | 0 | 0 | 0 | 0 | 28 |
| | $ 0 | $ 0 | $ 2 | $ 0 | $ 0 | $ 20,084 |
| TOTAL | 0 | 0 | 3 | 0 | 0 | 14,513 |
| | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | $ 730,610 |

Tables B-34 and B-35 are cost comparisons for items which were supplied by two or more actual sources and are shown only for service/theater type summaries. These tables give the number of distinct items, number of transactions and dollar value of these transactions at the unit price of each source; and expresses the second source in each table as a percentage of the first in terms of dollar value. Table B-34 is a cost comparison of COCESS and LP. Table B-35 is a cost comparison of GOCESS and DoD ICP sources.

Table B-34

MULTIPLE SOURCE COST COMPARISON

| TYPE SUMMARY | ITEMS | RECORDS | TOTAL COST COC | TOTAL COST LPO | LPO AS % OF COC |
|---|---|---|---|---|---|
| ARMSUM | | | | | .0 |
| APMCON | | | | | .0 |
| ARMGER | | | | | .0 |
| NAVSUM | | | | | .0 |
| NAVCON | | | | | .0 |
| AIRSUM | 23 | 299 | $11,935 | $10,682 | 89.5 |
| AIRCON | 12 | 179 | $5,345 | $4,665 | 87.3 |
| AIRGER | | | | | .0 |
| AIRCCC | | | | | .0 |
| AIRLPC | | | | | .0 |
| AIRNCO | | | | | .0 |
| MARCOR | | | | | .0 |
| TOTCON | 40 | 373 | $11,707 | $11,115 | 94.9 |
| GERSUM | | | | | .0 |
| OKISUM | | | | | .0 |
| GUMSUM | | | | | .0 |
| DODSUM | 58 | 642 | $24,231 | $21,165 | 87.3 |

Table B-35

MULTIPLE SOURCE COST COMPARISON

----------TOTAL COST----------

| INSTALLATION/ TYPE SUMMARY | ITEMS | RECORDS | ALLICP | GOC | GOC AS % OF ALLICP |
|---|---|---|---|---|---|
| ARMSUM | | | | | .0 |
| ARMCON | | | | | .0 |
| ARMGER | | | | | .0 |
| NAVSUM | | | | | .0 |
| NAVCON | | | | | .0 |
| AIRSUM | 293 | 6,324 | $63,136 | $98,901 | 156.6 |
| AIRCON | 273 | 4,466 | $31,522 | $37,700 | 119.6 |
| AIRGER | | | | | .0 |
| AIRCOC | | | | | .0 |
| AIRLPC | | | | | .0 |
| AIRNCO | | | | | .0 |
| MARCOR | | | | | .0 |
| TOTCON | 295 | 6,371 | $67,911 | $80,472 | 118.5 |
| GERSUM | | | | | .0 |
| OKISUM | | | | | .0 |
| GUMSUM | | | | | .0 |
| DODSUM | 333 | 8,332 | $102,899 | $147,044 | 142.9 |

5. Demand Data (Enclosure 5 data).

This data was submitted in two parts: total Fiscal Year 1975 expenditures to procure civil engineer materiel through LP was submitted by correspondence; and, data on COCESS unit price and Fiscal Year 1975 LP unit price for each submitting installation's 100 best sellers procured through LP was submitted by AUTODIN in a prescribed 80-column format.

Table B-36 shows, for each installation, the Fiscal Year 1975 expenditures for civil engineer materiel through LP.

Table B-36

FISCAL YEAR 1975 LP EXPENDITURES
(In Support of Civil Engineer)

| Installation | Dollar Value |
|---|---|
| Seymour-Johnson | $120,636.36 |
| Shaw | $468,610 * |
| Cannon | $100,545.35* |
| Hulburt | $371,440.00 |
| Holloman | $500,000 to $600,000 * |

* Estimate.

Table B-37 gives a total cost comparison of COCESS and LP prices in terms of type item identifier for each of the submitting installations. The number of items and extended value at both the COCESS unit price and LP unit price is shown for items identified with NSNs, items identified with MRNs, and items identified as not having an NSN or MRN. The Study Team observed that the Hurlburt Field COCESS submission (activity code HUR) totaled about 52% of the LP submission. Telephone conversations revealed that the COCESS unit prices were arrived at by taking a 50% discount from the Fiscal Year 1975 LP unit price. Since this does not give a true picture of the actual COCESS unit prices, the data from this activity was not used in any analyses in Volume I of this Report.

Table B-37

TOTAL COST COMPARISON: COCESS VS. NON-COCESS

| BASE | TOTAL COCESS COST ($) | TOTAL NON COCESS-COST($) | NO.F | COCESS VALUE F | NON-COCESS VALUE F | NC.M | COCESS VALUE M | NON-COCESS VALUE M | NO.Z | COCESS VALUE Z | NON-COCESS VALUE Z |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SEY | 226571.56 | 229619.74 | 18 | 31958.95 | 30485.95 | 0 | .00 | .00 | 83 | 196612.61 | 195129.79 |
| SMH | 173801.48 | 165414.64 | 0 | .00 | .00 | 26 | 30777.24 | 41768.28 | 73 | 142224.16 | 143646.36 |
| CAR | 123663.28 | 133595.68 | 51 | 48968.84 | 52433.75 | 28 | 5339.37 | 4772.84 | 21 | 69363.59 | 76389.89 |
| MUR | 68183.22 | 116428.54 | 0 | .00 | .00 | 0 | .00 | .00 | 100 | 68183.22 | 116428.54 |
| MOL | 44960.74 | 42536.68 | 0 | .00 | .00 | 4 | 4706.44 | 3181.16 | 56 | 40254.30 | 39837.44 |
| TOTAL | 638400.72 | 783595.28 | 69 | 80919.79 | 82919.70 | 58 | 40903.05 | 49642.28 | 373 | 516577.88 | 571423.22 |

## APPENDIX A

## ACTIVITIES VISITED

CONUS

Army

Fort Belvoir
Fort Bragg
Fort Sill
New Cumberland Army Depot

Navy

Washington Navy Yard
Public Works Center, Norfolk
Norfolk Naval Shipyard

Air Force

Andrews Air Force Base
Carswell Air Force Base
Dover Air Force Base
Hill Air Force Base
Offutt Air Force Base

Marine Corps

Camp Lejeune

OVERSEAS

Army

Headquarters, U.S. Army Europe (USAREUR), Heidelberg, Germany
U.S. Army Facilities Engineer Support Activity, Europe, Frankfurt
U.S. Army Procurement Agency, Europe, Frankfurt, Germany
V Corps and Community Command, Frankfurt, Germany
VII Corps and Community Command, Stuttgart, Germany
1st Support Brigade and Community Command, Kaiserslautern, Germany
U.S. Army Garrison Okinawa

Navy

Public Works Center, Guam

Air Force

Headquarters, U.S. Air Force Europe (USAFE), Ramstein Air Base, Germany
USAFE Procurement Center, Lindsey Air Station, Germany
Ramstein Regional Procurement Office, Ramstein Air Base, Germany
Hahn Air Base, Germany
Rhein Main Air Base, Germany
Ramstein Air Base, Germany
Kadena Air Base, Okinawa
Andersen Air Force Base, Guam

Marine Corps

Camp S.D. Butler, Okinawa

## APPENDIX B

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
WASHINGTON 25. D. C.

INSTALLATIONS AND LOGISTICS

16 Oct 1975

MEMORANDUM FOR The Assistant Secretary of the Army (I&L)
Assistant Secretary of the Navy (I&L)
Assistant Secretary of the Air Force (I&L)

SUBJECT: Materiel Support to Civil Engineer Operations -- Data Requirements

By memorandum dated 28 March 1975, subject: Materiel Support to Civil Engineer Operations, this Office initiated a study to review the different methods by which supply support is currently being provided to Department of Defense facilities/civil engineer operations. A Study Plan enclosed with that memorandum indicated a need to obtain and analyze data from the Military Services and, possibly, the Defense Supply Agency. Data requirements for these analyses have been establish, as follows:

a. Summary information, by Military Service; requirements are detailed in Enclosure 1.

b. Data on current and past Contractor Operated Civil Engineer Supply Store (COCESS) contracts; requirements are detailed in Enclosure 2.

c. Selected summary statistics applicable to the three long-established Air Force local-purchase-only COCESS activities; requirements are detailed in Enclosure 3.

d. Individual transaction data on receipts of materiel to support facilities engineer operations; requirements are detailed in Enclosure 4.

e. Summary and individual line item data on local purchase actions to support facilities engineer operations; requirements are detailed in Enclosure 5.

For the purposes of this study and this data collection, materiel to support facilities engineer operations is defined as those items of supply used primarily by the facilities engineer/civil engineer in the maintenance and repair of real property. Excluded from this definition are: administrative supplies; motor vehicle, materials handling and construction equipment repair parts; and fuels.



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The data collection requirements outlined in detail in Enclosures 1 through 5 are assigned Report Control System DD-I&L(OT) 7544. Except to the extent that ongoing data will have to be collected (see Enclosure 4, paragraph B.1), these data should be submitted to the Study Team by 1 December 1975. The card/tape formats in the Enclosures contain instructions for the submission of line item data via AUTODIN. Manual data and explanatory correspondence should be addressed to the Defense Supply Agency, attention: DSAH-LA, C.E. Support Study.

Any questions pertaining to this data call should be directed to Commander Paul Bonham at Autovon 284-6311 or to Mr. Daniel R. Schimmel at Autovon 284-6283.

Enclosures (5)
As stated

/s/ Paul H Riley
/t/ PAUL H. RILEY
Deputy Assistant Secretary of Defense
(Supply, Maintenance & Services)

## TOTAL SERVICE DATA

A. SUBMITTING ACTIVITIES

This data requirement is applicable to all four Military Services.

B. GENERAL INSTRUCTIONS

This data should be submitted by correspondence.

C. DATA REQUIREMENTS

1. FY 1975 Expenditures. Identify total FY 1975 expenditures to obtain Civil Engineer/Facilities Engineer materiel, separately by each different source of supply:

a. DoD Inventory Control Points

DCSC )
) separately for
DGSC )
) each different
DESC )
) ICP, if possible
etc. )

$_____

$_____

$_____

$_____

b. Local Purchase

Blanket Purchase Agreement $_____

Other Local Purchase Methods $_____

c. General Services Administration Federal Supply Schedule 1/ $_____

d. General Services Administration Stores Depot $_____

e. Contractor Operated Civil Engineer/ Facilities Engineer Supply Store (COCESS/COFESS) $_____

f. Other (identify). $_____

1/ If expenditures involving GSA Supply Schedules cannot be separately identified, they should be included in local purchase data and a notation to that effect provided with the data submission.

2. Installation Level Inventory Data. Identify the total inventory of facilities engineer materiel held at installation level in each Military Service. To the extent that information is available, this should include materiel held at central installation/activity supply points as well as that which is being held by the facilities engineer organization itself. Separately identify stock held for specific projects/work orders, and that which is being held for general facilities engineer support. Data are desired as of 30 June 1975, if available; however, furnish whatever inventory data are available and identify the as of date. Specific comments for each of the Military Services on this requirement is as follows:

a. Army: Furnish data separately for Ft Polk operating under COFESS and all other Army installations; Ft Polk data should be limited to Army-owned inventory.

b. Navy: Furnish data as a separate total for all Public Works Centers and all Public Works Departments/Lead Activities.

c. Air Force: Furnish data separately for full COCESS, LP-only COCESS, and non-COCESS installations. Note that this inventory data should be limited to AF-owned materiel, and should not include stocks owned and held by COCESS contractors at installation level.

d. Marine Corps: No specific comments.

## COCESS HISTORICAL DATA

### A. SUBMITTING ACTIVITIES

This data requirement is applicable to all Air Force bases which currently have a COCESS.

### B. GENERAL INSTRUCTIONS

This data should be submitted by correspondence.

### C. DATA REQUIREMENT

For the current and all previous COCESS contracts, separately for each individual contract period, furnish the following information:

a. Time period covered by the contract.

b. Forecasted volume of demand included in the Invitation For Bid, and the length of time covered by this forecast.

c. Actual sales which generated during the contract period.

d. Amount of discount(s) contained in the contract.

e. The nature of the base price (e.g., list price, jobber's price, wholesale price) to which this contract discount(s) apply. (If possible, furnish a copy of the actual price list referred to.)

f. Name of the contractor.

g. Type of COCESS (e.g., full COCESS or LP-only COCESS).

## SUMMARY DATA ON LP-ONLY COCESS OPERATIONS

### A. SUBMITTING ACTIVITIES

This data requirement is applicable to the three Air Force bases with long established local purchase-only COCESS operations-- Brooks, Hill, and Luke Air Force Bases.

### B. GENERAL INSTRUCTIONS

This data should be submitted by correspondence.

### C. DATA REQUIREMENTS

1. FY 1975 Expenditures. Identify total FY 1975 expenditures to obtain Civil Engineer/Facilities Engineer materiel, separately by each different source of supply:

a. DoD Inventory Control Points

DCSC ) separately for each different ICP, if possible — $_____

DGSC ) — $_____

DESC ) — $_____

etc. — $_____

b. Local Purchase

Blanket Purchase Agreement — $_____

Other Local Purchase Methods — $_____

c. General Services Administration Federal Supply Schedule 1/ — $_____

d. General Services Administration Stores Depot — $_____

e. Contractor Operated Civil Engineer Supply Store (COCESS) — $_____

f. Other (identify). — $_____

1/ If expenditures involving GSA Supply Schedules cannot be separately identified, they should be included in local purchase data and a notation to that effect provided with the data submission.

2. COCESS Prices. Determine from the current COCESS contractor what the total cost of those items obtained from DoD ICPs would have been had they been obtained through the COCESS-- that is, determine the contract base price for each item, apply the COCESS contract discount rate to determine the COCESS unit price, and apply this unit price to the total FY 1975 quantity of each item. (NOTE: If the number of items involved makes this an unacceptable workload, develop this information for the 100 "best sellers" of 1975-- i.e., the 100 items with the highest total dollar value of usage. If this is done, then identify the FY 1975 expenditures for these 100 items as procured from the DoD ICPs.)

3. Personnel Costs. Identify the total annual personnel cost of the base supply organization. The following guidance is furnished for this calculation: (1) Use composite standard rates for military personnel pay. (2) Use the salary of the authorized grade level at Step 5 for General Schedule employees, and the salary of the authorized grade level at Step 4 for Wage Board employees. (3) Use authorized grade levels and strengths, rather than actual on-hand personnel for these calculations.

4. Inventory Values. Furnish the value of the inventory of materiel which is being held to support both specific projects/work orders and for general support of the FE, separately for each of the following categories (data should be as of 30 June 1975, if available):

a. Materiel obtained from COCESS which is being held by the FE organization $_____

b. Materiel obtained from DoD ICPs which is being held by the FE organization $_____

c. Materiel obtained from other sources which is being held by the FE organization $_____

d. Materiel obtained from DoD ICPs which is being held by base supply for support of the FE organization $_____

e. Materiel obtained from other sources which is being held by base supply for support of the FE organization $_____

5. Local Purchase Costs. Identify the total overhead, or administrative, costs involved in the local purchase of materiel for a period of time (preferably FY 1975), separately for COCESS procurement, COPARS

procurement, and all other forms of local purchase. Identify the specific time period covered, as well as the total dollar value of materiel procured under each different method. Consider such functions/operations as the following, and how they might vary among these procurement methods, in developing this cost data:

a. Issuance of IFBs.

b. Contract negotiation.

c. Contract administration.

d. Technical contract administration.

e. Ordering (obtaining materiel) against established contracts.

f. Payment of bills.

(NOTE: In developing this data, consider costs incurred in: (1) the purchasing and contracting organization; (2) requiring organizations ordering local purchase materiel; (3) organizations other than purchasing and contracting providing technical administration over local purchase contracts (e.g., the FE over a COCESS contract, or motor vehicle maintenance over a COPARS contract); and, (4) finance and accounting in paying bills. Unless other cost data (e.g., supplies, computer time) is readily available, this cost data may be limited to personnel only; if this is done, so state in the transmittal letter.)

## RECEIPT DATA

### A. SUBMITTING ACTIVITIES

This data requirement is applicable to all Military Service installations being visited by the Study Team during field research, CONUS and overseas, to the two remaining long-established Air Force LP-only COCESS bases, to two established Air Force full COCESS bases, and to five selected Air Force bases which have just established LP-only COCESS contracts. A specific list of these activities is contained under the description of cc 74-76, in Paragraph C of this Enclosure.

### B. GENERAL INSTRUCTIONS

#### 1. General Descriptions of the Data Requirement

Information is desired on receipts of materiel by the Facilities Engineer organization, regardless of the source of the materiel, the purpose for which obtained by the FE, and the timing of the original requirement.

Receipt on which data is desired are those which occurred during a 60-day period. Preferred data is that applicable to the most recent 60-day period preceding the receipt of this data requirement. If sufficient data is not available to permit the submission of this data on receipts during the preceding 60-day period, then data may be submitted on receipts during the next 60 days, or on some combination of past and future receipts (e.g., 30 days of past receipts plus 30 days of future receipts) providing data on a total of 60 days receipts is furnished. If future receipt data is required to be collected, every effort should be made to insure that the data collection period ends by 15 December, to avoid the distortion of data which generally occurs around the Christmas-New Year period.

#### 2. Specific Data Requirement

Specific elements of data which are required, and their definitions, are contained in Paragraph C of this Enclosure.

Data should be submitted on all receipts, even if all desired elements of data are not available. Partially completed records will still be useful for some data analyses.

#### 3. Technical Preparation and Submission Requirements

Data may be submitted in either tape or card format. The record layout, which is contained in Paragraph C, is based on an 80-column card format.

All data is to be transmitted via AUTODIN to the Defense Supply Agency Administrative Support Center, Alexandria, Virginia. The AUTODIN header card for all submissions must contain "HHAG" as the content indicator code.

4. Edit/Validation Requirements

To insure the accuracy and validity of the data, each submitting activity is required to perform edit/validation checks before the data is transmitted to the Study Team.

The requirements of these edit/validation checks is contained in Paragraph D of this Enclosure.

C. SPECIFIED DATA REQUIREMENTS AND FORMAT

(General Notes:

1. If a given element of data is not available/not known, fill the field with "Z."

2. If a given element of data is not applicable to a specific receipt transaction, fill the field with "X." In some cases, the instructions below specify when this is to be done. If this must be done in other cases, forward an explanation to the Study Team of why the entry is not applicable.)

CC 1-3 Document Identifier Code: Enter Code "ZAP."

CC 4 Type Item Identifier: Enter a code which identifies the type of item identifying number contained in card columns 8-22, as follows:

Code "F"-- National Stock Number (NSN).

Code "M"-- Manufacturers Reference Number (MRN).

Code "Z"-- Neither NSN or MRN is available.

CC 5-7 Fill field with "B."

CC 8-22 Item Identifying Number: Enter the number which identifies the item of supply which was received. If available, enter the National Stock Number; otherwise, enter the Manufacturers Reference Number. If neither of these is available, fill this field with Code "Z"; do not enter locally assigned stock numbers.

National Stock Number: Enter the Federal Supply Class in cc 8-11, the Country Code in cc 12-13, and the National Item Identification Number in cc 14-20. Enter Code "X" in cc 21-22.

Manufacturers Reference Number: Enter the Federal Supply Code for Manufacturer (FSCM) in cc 8-12; if this information is not available, enter Code "Z" in these columns. Enter the reference number/part number, left justified, in cc 13-22, whether or not an FSCM is entered in cc 8-12; do not fill this field with zeros. No special characters other than blank or dash are authorized to be used in this field. Do not enter the Federal Supply Class in this record when the MRN is furnished as the item identifying number.

CC 23-37 Item Name/Nomenclature: Enter the item name/nomenclature, to the extent space permits. Use the standard supply format, starting with the item name.

CC 38-40 Authorized Source of Supply: Identify the source from which the materiel is authorized or required to be obtained under normal circumstances, regardless of the source from which this specific shipment was obtained. Use the following codes:

COC: Items authorized to be obtained from a Contractor Operated Civil Engineer Supply Store (COCESS) established for the reporting installation/activity. Use this only if you have a COCESS, and then only for those items which are authorized to be obtained from the COCESS as the normal source of supply for the reporting installation/activity. For example, items which are normally to be obtained from DoD Inventory Control Points (ICPs) but which may be obtained from a COCESS if the ICP cannot provide satisfactory supply support should not have COCESS identified as the "Authorized Source of Supply" regardless of how often that source is used; the "Authorized Source" for such items should be identified as the appropriate ICP.

LPO: Items authorized to be obtained through local procurement action as their normal source of supply, but excluding those items authorized to be obtained through a COCESS. This should not include items which are authorized to be obtained through local procurement only under special circumstances. For example, items authorized to be obtained by local purchase when the extended line item value is less than some specified amount, but which must otherwise be obtained from an ICP, should have the ICP identified as the "Authorized Source of Supply" in this field.

S9C: Items required to be obtained from the Defense Construction Supply Center (DCSC) as the normal source of supply.

S9E: Items required to be obtained from the Defense Electronics Supply Center (DESC).

S9G: Items required to be obtained from the Defense General Supply Center (DGSC).

S9I: Items required to be obtained from the Defense Industrial Supply Center (DISC).

ICP: Items required to be obtained from a DoD ICP other than one of the Defense Supply Centers for which codes are specifically provided above.

GSF: Items required to be obtained from a mandatory GSA Federal Supply Schedule.

GSS: Items required to be obtained from GSA, and stocked in the GSA Stores System.

FAB: Items required to be obtained only by local fabrication or local manufacture.

WWW: Items required to be obtained from a source other than one of those identified above. Identify the specific source in separate correspondence to the Study Team.

CC 41-43 Actual Source of Supply: Identify the actual source from which this quantity of materiel was received, regardless of the source to which the request for this materiel was directed, and regardless of the source from which this materiel is authorized to be obtained. This "Actual Source of Supply" does not have to be the same as that indicated in cc 38-40, "Authorized Source of Supply." Use the following codes: 1/

COC: Materiel obtained directly from a COCESS.

STK: Materiel furnished to the FE from stocks which were on-hand at the central installation/activity supply point. This code should be used for such shipments regardless of the source from which these stocks were obtained.

LPO: Materiel not in stock at the central installation/activity supply point (whether or not intended to be stocked) which was obtained for a specific FE requirement through local procurement action.

S9C: Materiel not in stock at the central installation/activity supply point (whether or not intended to be stocked) which was obtained from DCSC to meet a specific FE requirement.

S9E: Materiel not in stock at the central installation/activity supply point (whether or not intended to be stocked) which was obtained from DESC to meet a specific FE requirement.

S9G: Materiel not in stock at the central installation/activity supply point (whether or not intended to be stocked) which was obtained from DGSC to meet a specific FE requirement.

S9I: Materiel not in stock at the central installation/activity supply point (whether or not intended to be stocked) which was obtained from DISC to meet a specific FE requirement.

ICP: Materiel not in stock at the central installation/activity supply point (whether or not intended to be stocked) which was obtained from a DoD ICP other than one of the Defense Supply Centers identified above to meet a specific FE requirement.

GSF: Materiel not in stock at the central installation/activity supply point (whether or not intended to be stocked) which was obtained through use of a GSA Federal Supply Schedule to meet a specific FE requirement.

GSS: Materiel not in stock at the central installation/activity supply point (whether or not intended to be stocked) which was obtained from the GSA Stores System to meet a specific FE requirement.

FAB: Materiel not in stock at the central installation/activity supply point (whether or not intended to be stocked) which was locally fabricated or manufactured to meet a specific FE requirement.

DPD: Materiel obtained from the DoD surplus/excess materiel program (i.e., through the Defense Property Disposal Service organization) to meet a specific FE requirement.

FEX: Materiel obtained from stocks under the control of the FE which were excess to previous FE projects.

WWW: Materiel not in stock at the central installation/activity supply point (whether or not intended to be stocked) which was obtained from a source other than one of those identified above. Identify the specific source involved in separate correspondence to the Study Team.

CC 44-47 Requirement Date: Enter the Julian date on which a firm requirement for this materiel was established by the FE to the organization responsible for obtaining the materiel. In this context, a "firm requirement" is one for which all administrative requirements (such as establishing fund availability) have been met. This should identify the date on which the requirement was transmitted to the supply organization or, for materiel known to require procurement action, to the buying organization.

CC 48-51 Requisition/Purchase Date: If the materiel was furnished from stocks which were on-hand at the central installation/activity supply point, enter Code "X." If the materiel was obtained by requisition from another supply activity or from an Inventory Control Point, enter the Julian date of the requisition to that other supply activity or to the ICP. If the materiel was obtained by local purchase, enter the date on which the firm contract/purchase order was released to the supplier.

CC 52-55 Receipt Date: For materiel which was delivered, enter the date the materiel was actually received by the FE. For materiel which was picked up by the FE organization as part of a regular, scheduled pick-up, enter the date of the pick-up. For materiel which was picked up by the FE organization as a result of notification that the material was available, enter the date the notification was received by the FE.

CC 56-57 Priority: Enter the UMMIPS priority designator (01-15) of the requirement, as established by the FE organization.

CC 58-63 Quantity Received: Enter the quantity of the item which was received, regardless of the quantity which was originally requisitioned/requested. Right justified, zero filled left. Fill the field with asterisks for values which exceed the capacity of this field, and identify the item and its quantity in separate correspondence to the Study Team.

CC 64-65 Unit of Issue: Enter standard unit of issue.

CC 66-73 Unit Price: Enter the unit price, with last two digits equal to cents and no decimal point. Right justified, zero filled left. Enter asterisks for values which exceed the capacity of this field and identify the item and its unit price in separate correspondence to the Study Team. Enter the price actually charged to the FE organization for the materiel. Where this price includes a locally added surcharge (as, for example, in one Military Service, in which a 7% surcharge is added to the actual price paid for local purchase materiel when it is sold to users), furnish an explanation of this

charge (i.e., the types of items to which applied, the amount/size of the charge, and the directive authorizing the charge) in separate correspondence to the Study Team.

CC 74-76 Submitting Activity: Identify the installation/activity submitting this data by inserting the appropriate code from the following list:

Army:

Fort Bragg -- BRG
Fort Sill -- SIL
New Cumberland Army Depot -- CUM
Kaiserslautern Army Depot -- KSL
Baumholder Army Depot -- BAD
Army Garrison, Okinawa -- OKI

Navy:

PWC Norfolk -- NOR
Norfolk Naval Shipyard -- NSY
PWC Guam -- GUM

Air Force:

Carswell AFB -- CAR
Hill AFB -- OGD
Brooks AFB -- SAN
Luke AFB -- LUK
Seymour AFB -- SEY
Shaw AFB -- SHW
Cannon AFB -- CNN
Hurlburt Field (Eglin AFB) -- HUR
Holloman AFB -- HOL
Kadena AB -- KAD
Andersen AFB -- AND
Dover AFB -- DOV
Rhein-Main AB -- RMN
Ramstein AB - RAM
March AFB -- MAR
Pease AFB -- PEA

Marine Corps:

Camp Lejeune -- LEJ
Camp Butler, Okinawa -- BUT

CC 77-80 Fill field with "B."

D. EDIT/VALIDATION CRITERIA

The following checks must be accomplished before data is processed for analysis. Rejects will be returned to the submitting activity for correction and resubmission. Accomplishment of these edit/validation checks by the submitter before data is released to the Study Team will save time and effort on the part of the submitting activity, the Study Team, and their respective supporting data processing activities.

CC 1-3 Must be "ZAP."

CC 4 Must be F, M, or Z.

CC 5-7 Must be "B."

CC 8-22 If CC 4 = F, CC 8-20 must be numeric and CC 21-22 must be "X." If CC 4 = M, CC 8-12 must be all numeric or all "Z"; CC 13-22 must be alphameric, blank or dash-- no other special characters. If CC 4 = Z, CC 8-22 must be Z.

CC 38-40 Must be: COC, LPO, S9C, S9E, S9G, S9I, ICP, GSF, GSS, FAB, or WWW.

CC 41-43 Must be: COC, STK, LPO, S9C, S9E, S9G, S9I, ICP, GSF, GSS, FAB, DPD, FEX, or WWW.

CC 44-47 Must be numeric.

CC 48-51 If CC 41-43 = STK, must be X. Otherwise must be all numeric; if all numeric, value must be equal to or greater than CC 44-47.

CC 52 Must be "5."

CC 53-55 Must be all numeric. Must be equal to or greater than CC 44-47. If CC 48-51 is all numeric, must be equal to or greater than CC 48-51.

CC 56-57 Must be Ø1 - 15 only.

CC 58-63 Must be all numeric or all asterisks.

CC 64-65 Must be alpha.

CC 66-73 Must be all numeric or all asterisks.

CC 74-76 Must be code of submitting activity.

CC 77-80 Must be "B."

The preceding are mechanical validity checks, to detect obvious errors. The following edit/validity checks will require some review action on the part of knowledgeable personnel at the submitting activity, since these are designed to identify more subtle error conditions.

1. Summarize the dollar value of receipts by each Authorized Source (CC 38-40) and Actual Source (CC 41-43). Examine each of these subtotals and the grand total to determine if these values appear credible.

2. Determine the number receipts obtained from each source; examine these to determine if the quantity appears credible.

3. Extract all items identified with an Authorized Source (CC 38-40) or Actual Source (CC 41-43) as "WWW." Examine each of these and confirm the validity of this coding; insure that these items and their sources are identified in a letter to the Study Team.

4. If the value of positions 58 through 59 is greater than Ø, extract the record. Examine each of these records and confirm the validity of the indicated receipt quantities.

5. Extract all records with asterisks in CC 58-63. Examine each of these records and confirm that the quantities of these receipts equaled one million or greater; insure that these items and their quantities are identified in a letter to the Study Team.

6. If the value of positions 66 through 68 is greater than Ø extract the record. Examine each of these records and confirm the validity of the indicated unit price.

7. Extract all records with asterisks in CC 66-73. Examine each of these records and confirm that the unit prices equaled $1 million or more; insure that these items and their unit prices are identified in a letter to the Study Team.

8. Extract all records with a number value other than 3, 4, or 5 in CC 44 or 48. Examine each of these records and confirm the year of the Requirement and of the Requisition/Purchase.

1/ It was noted during field research that PWC Guam had no means of showing transactions for which the actual source of supply was the Naval Supply Department (NSD), Guam, or the Naval Supply Center (NSC), Oakland; therefore, two actual source codes for use by PWC Guam only (submitting activity code GUM) were added - 'NSD' to reflect the NSD, Guam, and 'OAK' to reflect the NSC, Oakland.

## DEMAND DATA

### A. SUBMITTING ACTIVITIES

This data requirement is applicable to five selected Air Force installations which have just established LP-only COCESS contracts. Specific activities selected to report this data are: Seymour AFB, Shaw AFB, Cannon AFB, Hurlburt Field (Eglin AFB), and Holloman AFB.

### B. GENERAL INSTRUCTIONS

1. General Description of the Data Requirement. Information is desired on the usage of local purchase materiel by the FE organization, the cost of materiel procured through local purchase, and the projected cost of this materiel if it were to be obtained through a COCESS.

2. Specific Data Requirement

a. Identify the total Fiscal Year 1975 expenditures under the local purchase program for materiel to support FE operations. Forward this by correspondence to the Study Team.

b. Furnish selected elements of data on the 100 local purchase items which experienced the greatest numerical demand during Fiscal Year 1975; this selection should exclude GSA items. Specific elements of data which are desired, and their definitions, are contained in Paragraph C of this Enclosure. Data should be submitted on all 100 "best sellers," even if all desired elements of data are not available. Partially completed records will still be useful in some data analyses.

3. Technical Preparation and Submission Requirements

Data may be submitted in either tape or card format. The record layout, which is contained in Paragraph C, is based on an 80-column card format.

All data is to be transmitted via AUTODIN to the Defense Supply Agency Administrative Support Center, Alexandria, Virginia. The AUTODIN header card for all submissions must contain "HHAG" as the content indicator code.

4. Edit/Validation Requirements

To insure the accuracy and validity of the data, each submitting activity is required to perform edit/validation checks before the data is transmitted to the Study Team.

The requirements of these edit/validation checks are contained in Paragraph D of this Enclosure.

C LINE ITEM DATA REQUIREMENTS AND FORMAT

(General Notes:

1. If a given element of data is not available/not known, fill the field with "Z."

2. If a given element of data is not applicable to a specific line item, fill the field with "X." In some cases, the instructions below specify when this is to be done. If this must be done in other cases, forward an explanation to the Study Team of why the entry is not applicable.)

CC 1-3 Document Identifier Code: Enter Code "WAP."

CC 4 Type Item Identifier: Enter a code which identifies the type of item identifying number contained in card columns 8-22, as follows:

Code "F" -- National Stock Number (NSN).

Code "M" -- Manufacturers Reference Number (MRN).

Code "Z" -- Neither NSN or MRN is available.

CC 5-7 Fill field with "B."

CC 8-22 Item Identifying Number: Enter the number which identifies the item of supply which was procured. If available, enter the National Stock Number; otherwise, enter the Manufacturers Reference Number. If neither of these is available, fill this field with Code "Z"; do not enter locally assigned stock numbers.

National Stock Number: Enter the Federal Supply Class in cc 8-11, the Country Code in cc 12-13, and the National Item Identification Number in cc 14-20. Enter Code "X" in cc 21-22.

Manufacturers Reference Number: Enter the Federal Supply Code for Manufacturer (FSCM) in cc 8-12; if this information is not available, enter Code "Z" in these columns. Enter the reference number/part number, left justified, in cc 13-22, whether or not an FSCM is entered in cc 8-12; do not fill this field with zeros. No special characters other than blank or dash are authorized to be used in this field. Do not enter the Federal Supply Class in this record when the MRN is furnished as the item identifying number.

CC 23-37 Item Name/Nomenclature: Enter the item name/nomenclature, to the extent space permits. Use the standard supply format, starting with the item name.

CC 38-40 Enter Code "LPO."

CC 41-49 Fill field with "B."

CC 50-57 COCESS Unit Price: Enter the unit price which will be paid for the item when it is procured from the COCESS, with last two digits equal to cents and no decimal point. Right justified, zero filled left. Since this data is being submitted on the 100 "best sellers" for Fiscal Year 1975, it is assumed that these items will be reflected in whatever item/price listings are made part of the COCESS contract. The unit price must be compatible with the Unit of Issue recorded in cc 64-65. Enter asterisks for values which exceed the capacity of this field and identify the item and its COCESS unit price in separate correspondence to the Study Team.

CC 58-63 Quantity: Enter the total of this item which was purchased during Fiscal Year 1975, regardless of the amount which was actually issued to/sold to/used by the FE. Right justified, zero filled left. Fill the field with asterisks for values which exceed the capacity of this field, and identify the items and its quantity in separate correspondence to the Study Team.

CC 64-65 Unit of Issue: Enter the unit of issue. If the item is procured, managed, and/or issued under more than one unit of issue, the preferred unit of issue is the one under which the item is procured. In any event, the unit of issue must be compatible with the Unit Price recorded in cc 50-57 and 66-72.

CC 66-73 Non-COCESS Unit Price: Enter the unit price paid for the item in Fiscal Year 1975 with last two digits equal to cents and no decimal point. Right justified, zero filled left. If available, enter the most recent price paid for the item in Fiscal Year 1975. In any event, the unit price must be compatible with the Unit of Issue recorded in cc 64-65. Enter asterisks for values which exceed the capacity of this field and identify the item and its unit price in separate correspondence to the Study Team.

CC 74-76 Submitting Activity: Identify the installation/activity submitting this data by inserting the appropriate code from the following list:

Seymour AFB -- SEY
Shaw AFB -- SHW
Cannon AFB -- CNN
Hurlburt Field (Eglin AFB) -- HUR
Holloman AFB - HOL

CC 77-80 Fill field with "B."

D. EDIT/VALIDATION CRITERIA

The following checks must be accomplished before data is processed for analysis. Rejects will be returned to the submitting activity for correction and resubmission. Accomplishment of these edit/validation checks by the submitter before data is released to the Study Team will save time and effort on the part of the submitting activity, the Study Team, and their respective supporting data processing activities.

CC 1-3 Must be "WAP."

CC 4 Must be F, M, or Z.

CC 5-7 Must be "B."

CC 8-22 If CC 4 = F, CC 8-20 must be numeric and CC 21-22 must be "X." If CC 4 = M, CC 8-12 must be all numeric or all "Z"; CC 13-22 must be alphameric, blank or dash-- no other special characters. If CC 4= Z, CC 8-22 must be Z.

CC 38-40 Must be "LPO."

CC 41-49 Must be "B."

CC 50-57 Must be all numeric or all asterisks.

CC 58-63 Must be all numeric or all asterisks.

CC 64-65 Must be alpha.

CC 66-73 Must be all numeric or all asterisks.

CC 74-76 Must be code of submitting activity.

CC 77-80 Must be "B."

The preceding were mechanical validity checks, to detect obvious errors. The following edit/validity checks will require some review action on the part of knowledgeable personnel at the submitting activity, since these are designed to identify more subtle error conditions.

1. Summarize the dollar value of purchases and examine this total to determine if it appears credible.

2. If the value of positions 50 through 52 is greater than Ø, extract the record. Examine each of these records and confirm the validity of the indicated unit price.

3. Extract all records with asterisks in CC 50-57. Examine each of these records and confirm that the unit prices equaled $1 million or more; insure that these items and their unit prices are identified in a letter to the Study Team.

4. If the value of positions 58 through 59 is greater than Ø, extract the record. Examine each of these records and confirm the validity of the indicated purchase quantities.

5. Extract all records with asterisks in CC 58-63. Examine each of these records and confirm that the quantities of these receipts equaled one million or greater; insure that these items and their quantities are identified in a letter to the Study Team.

6. If the value of positions 66 through 68 is greater than Ø, extract the record. Examine each of these records and confirm the validity of the indicated unit price.

7. Extract all records with asterisks in CC 66-73. Examine each of these records and confirm that the unit prices equaled $1 million or more; insure that these items and their unit prices are identified in a letter to the Study Team.

## APPENDIX C

## SUBMITTING INSTALLATIONS

| Service | Installation | Encl 3 | Encl 4 | Encl 5 |
|---|---|---|---|---|
| Army | U.S. Army Garrison, Okinawa | | X | |
| | V Corps and Community Command, Frankfurt | | X | |
| | VII Corps and Community Command, Stuttgart | | X | |
| | Fort Bragg | | X | |
| | Fort Sill | | X | |
| | 1st Support Brigade and Community Command, Kaiserlautern | | X | |
| | New Cumberland Army Depot | | X | |
| Navy | Norfolk Naval Shipyard | | X | |
| | PWC Guam | | X | |
| | PWC Norfolk | | X | |
| Air Force | Andersen Air Force Base | | X | |
| | Brooks Air Force Base | X | X | |
| | Cannon Air Force Base | | X | X |
| | Carswell Air Force Base | | X | |
| | Dover Air Force Base | | X | |
| | Hahn Air Base | | X | |
| | Hill Air Force Base | X | X | |
| | Holloman Air Force Base | | X | X |
| | Hurlburt Field (Eglin AFB) | | X | X |
| | Kadena Air Base | | X | |
| | Luke Air Force Base | X | X | |
| | March Air Force Base | | X | |
| | Offutt Air Force Base | | X | |
| | Pease Air Force Base | | X | |
| | Ramstein Air Base | | X | |
| | Rhein-Main Air Base | | X | |
| | Seymour Air Force Base | | X | X |
| | Shaw Air Force Base | | X | X |
| Marine Corps | Camp Butler, Okinawa | | X | |
| | Camp Lejeune | | X | |

APPENDIX D

**DEFENSE SUPPLY AGENCY**
DEFENSE LOGISTICS ANALYSIS OFFICE
CAMERON STATION
ALEXANDRIA, VIRGINIA 22314

23 March 1976

**SUBJECT:** Materiel Support to Civil Engineer Operations - Data Requirements

**TO:** Commander, Carswell AFB, ATTN: DEPM, Fort Worth, Texas
Commander, March AFB, ATTN: DEPM, Riverside, California
Commander, Offutt AFB, ATTN: Mr.Calloway, Omaha, Nebraska

1. References:

a. Telecon, 23 March 1976, Mr. Calloway, Offutt AFB; Maj. Brueggemeier, Hq SAC; and Mr. Schimmel and LTC Rioux, DLAO.

b. Conference Call, 19 March 1976; Maj. Brueggemeier and Mr. Jansen, Hq SAC; Sgt Black, Carswell AFB; Sgt Majeirri, March AFB; Mr. Calloway, Offutt AFB; and Mr. Schimmel, LTC Rioux, and Mr. Scott, DLA0.

c. Memorandum, 16 October 1975, ASD (I&L)-SR; to the Assistant Secretaries (I&L) of the Army, Navy and Air Force; subject as above.

2. As agreed to in references a and b, improved COCESS/GOCESS data will be submitted by the addressees. This data will be submitted for the period 29 March through 21 May 1976. Instructions supplementing reference c, and limited only to changes to those instructions, are contained in enclosure 1 to this letter.

3. Carswell and March AFBs are also requested to submit a copy of their current COCESS MRL to this office at their earliest convenience.

4. Any questions pertaining to this data call should be directed to Mr. Phil Scott of the Study Team at Autovon 284-6311.

DM Schimmel

1 Encl

DANIEL R. SCHIMMEL
Team Director
C.E. Support Study

cc:
Hq SAC Offutt (DEMG)
Attn:Maj.Brueggemeier
Hq AF/PREMA
Attn: LTC Pope

AMERICAN REVOLUTION BICENTENNIAL 1776-1976



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## SUBMISSION OF IMPROVED RECEIPT DATA

A. SUBMITTING ACTIVITIES

This data requirement is applicable to Carswell, March, and Offutt.

B. GENERAL INSTRUCTIONS

1. General Description of the Data Requirement

Generally, the desired information is that which was requested in the original data requirement-- that is, information on receipts of materiel by the Facilities Engineer (Base Civil Engineering) organization.

However, the information requested here is limited to receipts of materiel obtained through the COCESS operation at Carswell and March AFBs and through the GOCESS operation at Offutt AFB.

Further, the information requested here is limited to receipts which occurred during the period 29 March to 21 May 1976.

2. Data Submittal

Data will be submitted in the same 80-column card format as in the earlier submissions.

All data is to be transmitted at two-week intervals via AUTODIN to the Defense Supply Agency Administrative Support Center, Alexandria, Virginia. The AUTODIN header card for all submission must contain "HHAG" as the content and RUEBDSA as the Routing Identifier Code.

Advise the Defense Logistics Analysis Office by message (to Headquarters, Defense Supply Agency) or telephone (Autovon 284-6311) when the final data submission has been made.

C. ADDITIONAL COMMENTS

The following comments are applicable to paragraph C.2. of Enclosure 4 of the original 16 October data call.

CC 8-22 Item Identifying Number: Enter the number which identifies the item of supply which was received. If available, enter the National Stock Number (NSN); otherwise, enter the Manufacturers Reference Number (MRN). It is most important for the purposes of this study that meaningful item identifying numbers be submitted with this receipt information. An NSN is the most meaningful number which can be submitted with this data; although not quite as useful, an MRN (consisting of the Manufacturers' Code and Part Number) is also a useful number. If neither of these can be identified after a reasonable research effort, fill this field with Code "Z"; do not enter locally assigned stock numbers.

National Stock Number (NSN): Enter the Federal Supply Class in CC 8-11, the Country Code in CC 12-13, and the National Item Identification Number in CC 14-20. Enter Code "X" in CC 21-22.

Manufacturers' Reference Number (MRN): Enter the Federal Supply Code for Manufacturer (FSCM) obtained from Cataloging Handbook H 4-1, in CC 8-12, for the manufacturer (not the distributor or wholesaler) of the item; if the manufacturer is not listed in H-4-1, or cannot be identified, enter Code "Z" in these columns. Enter the reference number/part number, left justified, in CC 13-22, whether or not a FSCM is entered in CC 8-12; do not fill this field with zeros. No special characters other than blank or dash are authorized to be used in this field. Do not enter the Federal Supply Class in this record when the MRN is furnished as the item identifying number.

CC 23-37 Item Name/Nomenclature: Do not enter such terms as "Bench Stock," "Consumables," "Central Issue," etc.

CC 38-40 Authorized Source of Supply: In addition to the codes listed, Offutt AFB is authorized use of the following:

GOC: Items authorized to be obtained from the Government Operated Civil Engineer Supply Store (GOCESS) established at Offutt AFB. Use this only for those items which are authorized to be obtained from the GOCESS as the normal source of supply. For example, items which are normally to be obtained from DoD ICPs but which may be obtained from the GOCESS if the ICP cannot provide satisfactory supply support should not have GOCESS identified as the "Authorized Source of Supply" regardless of how often that source is used; the Authorized Source for such items should be identified as the appropriate ICP.

CC 41-44 Actual Source of Supply: Enter COC except Offutt AFB enter GOC.

CC 56-57 Priority: Generally, UMMIPS Issue Priority Designators (IPDs) are not assigned to COCESS/GOCESS transactions. However, numeric priorities are required for the evaluation model being used by the Study Team. Therefore, enter the UMMIPS IPD (01-15) that would have been used if the request had gone to Base Supply for support.

APPENDIX E

DEFENSE SUPPLY AGENCY
HEADQUARTERS
CAMERON STATION
ALEXANDRIA, VIRGINIA 22314

PLY
EFER TO

25 March 1976

SUBJECT: Materiel Support to Civil Engineer Operations - Data Requirements

TO: Commander, Seymour Johnson AFB, Attn: DEPM, No. Carolina 27531
Commander, Hurlburt Field, Attn: DEPM, Florida 32544
Commander, Shaw AFB, Attn: DEI, South Carolina 29152

1. References:

a. Conference Call, 22 March 1976: Captain Bailey, Hq TAC; Mrs. Gregory, Seymour Johnson AFB; Maj Howard and TSG Porter, Shaw AFB; SGT Monarch, Hurlburt Field; and Mr. Schimmel, LTC Rioux, and Mr. Scott, DLAO.

b. Telephone conversations of:

(1) 24 March 1976 between LTC Rioux, DLAO and Mr. Allen and Mrs. Gregory, Seymour Johnson AFB;

(2) 24 March 1976 between Mr. Scott, DLAO and TSG Porter, Shaw AFB; and,

(3) 25 March 1976 between Mr. Scott, DLAO and SGT Monarch, Hurlburt Field.

c. Memorandum, 16 October 1975, ASD(I&L)-SR, to the Assistant Secretaries (I&L) of the Army, Navy and Air Force, subject as above.

2. As agreed to in References a and b(1), Seymour Johnson AFB will submit item identifying numbers for COCESS transactions which were previously submitted in accordance with Reference c. This will be done by a complete resubmittal of all COCESS transaction records, to replace those COCESS transaction records now in the files of the Study Team. This resubmittal will be transmitted by approximately 26 April 1976.

3. As agreed to in References a and b (2) and (3), improved COCESS data will be submitted by Shaw AFB and Hurlburt Field. This data will be submitted for the period 29 March through 21 May 1976. Instructions supplementing Reference c, and limited only to changes to those instructions, are contained in Enclosure 1 to this letter.



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DLAO

25 March 1976

SUBJECT: Materiel Support to Civil Engineer Operations - Data Requirements

4. Addresses are also requested to submit a copy of their current COCESS MRL to this office at their earliest convenience.

5. Any questions pertaining to this data call should be directed to Mr. Phil Scott of the Study Team at 284-6311.

/s/ D.R. Schimmel
/t/ DANIEL R. SCHIMMEL
Team Director
C.E. Support Study

1 Encl
(Hurlburt & Shaw AFBs only)

cc:
Hq TAC/DEMG
Attn: Capt Bailey
Hq USAF/PREMA
Attn: LTC Pope

## SUBMISSION OF IMPROVED RECEIPT DATA

### A. SUBMITTING ACTIVITIES

This data requirement is applicable to Shaw Air Force Base and to Hurlburt Field.

### B. GENERAL INSTRUCTIONS

#### 1. General Description of the Data Requirement

Generally, the desired information is that which was requested in the original data requirement--that is, information on receipts of materiel by the Facilities Engineer (Base Civil Engineering) organization.

However, the information requested here is limited to receipts of materiel obtained through the COCESS operation at the named bases.

Further, the information requested here is limited to receipts which occurred during the period 29 March to 21 May 1976.

#### 2. Data Submittal

Data will be submitted in the same 80-column card format as in the earlier submissions.

All data is to be transmitted at two-week intervals via AUTODIN to the Defense Supply Agency Administrative Support Center, Alexandria, Virginia. The AUTODIN header card for all submission must contain "HHAG" as the content and RUEBDSA as the Routing Identifier Code.

Advise the Defense Logistics Analysis Office by message (to Headquarters, Defense Supply Agency) or telephone (Autovon 284-6311) when the final data submission has been made.

C. ADDITIONAL COMMENTS

The following comments are applicable to paragraph C.2. of Enclosure 4 of the original (16 October) data call.

CC 8-22 Item Identifying Number: Enter the number which identifies the item of supply which was received. If available, enter the National Stock Number (NSN); otherwise, enter the Manufacturers Reference Number (MRN). It is most important for the purposes of this study that meaningful item identifying numbers be submitted with this receipt information. An NSN is the most meaningful number which can be submitted with this data; although not quite as useful, an MRN (consisting of the Manufacturers' Code and Part Number) is also a useful number. If neither of these can be identified after a reasonable research effort, fill this field with Code "Z"; do not enter locally assigned stock numbers.

National Stock Number (NSN): Enter the Federal Supply Class in CC 8-11, the Country Code in CC 12-13, and the National Item Identification Number in CC 14-20. Enter Code "X" in CC 21-22.

Manufacturers' Reference Number (MRN): Enter the Federal Supply Code for Manufacturer (FSCM) obtained from Cataloging Handbook H 4-1, in CC 8-12, for the manufacturer (not the distributor or wholesaler) of the item; if the manufacturer is not listed in H 4-1, or cannot be identified, enter Code "Z" in these columns. Enter the reference number/part number, left justified, in CC 13-22, whether or not an FSCM is entered in CC 8-12; do not fill this field with zeros. No

special characters other than blank or dash are authorized to be used in this field. Do not enter the Federal Supply Class in this record when the MRN is furnished as the item identifying number.

CC 23-37 Item Name/Nomenclature: Do not enter such terms as "Bench Stock," "Consumables," "Central Issue," etc.

CC 41-44 Actual Source of Supply: Enter COC.

CC 56-57 Priority: Generally, UMMIPS Issue Priority Designators (IPDs) are not assigned to COCESS transactions. However, numeric priorities are required for the evaluation model being used by the Study Team. Therefore, enter the UMMIPS IPD (01-15) that would have been used if the request had gone to Base Supply for support.